

DOMINION OF CANADA

ANNUAL REPORT

OF THE

DEPARTMENT OF RAILWAYS AND CANALS

FOR THE FISCAL YEAR FROM APRIL 1, 1913, TO MARCH 31, 1914

*Submitted in accordance with the provisions of the Revised Statutes of Canada, 1900.
Chapter 35, Section 33.*

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OTTAWA

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EXCELLENT MAJESTY.

1915

To Field Marshal His Royal Highness Prince Arthur William Patrick Albert, Duke of Connaught and of Strathearn, K.C., K.T., K.P., etc., etc., etc., Governor General and Commander in Chief of the Dominion of Canada.

MAY IT PLEASE YOUR ROYAL HIGHNESS,—

The undersigned has the honour to present to Your Royal Highness the Annual Report of the Department of Railways and Canals, of the Dominion of Canada, for the past fiscal year from April 1, 1913, to March 31, 1914. /

F. COCHRANE,
Minister of Railways and Canals.

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REPORT

OF THE

DEPUTY MINISTER OF RAILWAYS AND CANALS

FOR THE YEAR ENDING MARCH 31, 1914.

To the Honourable F. COCHRANE,
Minister of Railways and Canals.

SIR,—I have the honour to submit the annual report of the Department of Railways and Canals for the fiscal period of twelve months ended March 31, 1914.

The annual reports of the engineers, together with general and special reports from superintendents, both of railways and canals, and from other officers in the department are given in appendices. These include the report of the General Manager of Government Railways; the report of the Government Chief Engineer of the western division of the Transcontinental Railway; the report of the Chairman of the Quebec Bridge Engineers' Board; and the report of the Chief Engineer of the Department.

In Part I will be found statements of the accountant of the department, showing the amounts expended during the past fiscal year in construction, repair and maintenance of the several works under the department; also statements showing total expenditure on each canal since its construction, and on each of the Government railways; also a statement showing payments made, year by year, to subsidized railways, with the aggregates of such payments.

In Part II are the statements of the Departmental Solicitor of the contracts and agreements entered into during the year.

GENERAL SUMMARY.

During the twelve months of the past fiscal year 1913-14 the expenditures made by or through the department on its several works of operation, maintenance and construction, both railway and canal, and in furtherance by subsidy, under specific votes granted by Parliament, of railway enterprises in various parts of Canada other than the Government roads, also the revenue derived from the Government works, aggregate as follows:—

The total railway expenditure amounted to \$57,240,981.57, of which \$21,646,095.15 was charged to capital, \$13,570,525.45 to revenue, and \$19,420,255.36 to income.

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The total Government expenditure on canals prior to and since July 1, 1867, to March 31, 1914, amounts on capital account to \$106,981,780.76, of which \$20,593,866.13

The railway expenditure on capital account included \$4,329,694.68 for the Intercolonial Railway, \$129,574.95 for the Prince Edward Island Railway, \$12,670,108.27 for the eastern division (from Moncton to Winnipeg) of the National Transcontinental Railway, which is in course of construction by a board of commissioners, \$4,498,717.25 for the Hudson Bay Railway, and \$2,604,105.61 for the Quebec Bridge.

The railway expenditure on income included a total of \$19,036,236.77 paid as subsidies to railways other than the Government roads, and \$263,606.59 for the Board of Railway Commissioners for Canada.

The expenditure on the Intercolonial Railway amounted to \$17,196,943.68, namely, \$4,329,694.68 on capital account, and on revenue account (working expenses) \$12,867,249. On the maintenance of the Windsor Branch the expenditure was \$26,486.98, charged to revenue account.

On the Prince Edward Island Railway, the total expenditure was \$700,990.32, of which \$129,574.95 was charged to capital and \$571,415.27 to revenue.

The expenditure on canals aggregated \$4,583,558.85, of which \$2,829,661.34 was chargeable to capital account, \$389,284.75 to income, \$745,220.81 for staff, and \$619,391.95 for repairs, the last two amounts being charged to revenue.

Adding to the above for miscellaneous expenditures common to both branches, the sum of \$5,671.08, the total expenditure for the year on railways and canals was \$61,830,211.50.

The total revenue derived from the Government railway and canal works was \$13,774,505.43, of which the railways produced \$13,394,317.37, and the canals \$380,188.06,* the sum of \$259,277.01 being derived from hydraulic and other rents.

The total Government expenditure on railways prior to and since Confederation (July 1, 1867) up to March 31, 1914, amounts, on capital account, to \$328,265,788.28, including expenditure on the Quebec Bridge, and also the sum of \$25,000,000 granted to the Canadian Pacific Railway Company for its main line; also the amount, \$660,683.09, expended on the Annapolis and Digby Railway. In addition, there has been expended from the consolidated fund a total of \$277,062,106.49, covering the operating expenses of the Government roads, and \$67,566,152.69 subsidies other than the main line of the Canadian Pacific Railway, making a total expenditure of \$605,327,594.77. Of this amount, the sum of \$13,881,460.65 was expended prior to Confederation, namely, on the construction of portions of what is now the Intercolonial Railway system, \$10,766,725.54, and on the construction of the Prince Edward Island Railway, \$3,114,735.11.

*Under the authority of an order in council, dated June 22, 1905, the system of charging tolls for the passage of vessels and goods was abolished on all the canals of the Dominion. Records, however, are kept for statistical purposes, and the compilation of the resultant figures is given in a separate report issued by the department.

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was expended prior to Confederation, and from the consolidated fund, for operation, maintenance and repairs, to \$35,909,857.60, making a total of \$142,891,638.36.

The total expenditure on the two branches, railways and canals, up to March 31, 1914, is as above, \$748,219,533.13; adding to which for general expenditures embracing both, the further sum of \$830,659.15, the grand total expenditure amounts to \$749,050,192.28.†

The total revenue collected since July 1, 1867, to March 31, 1914, amounts, from the Government railways, to \$194,277,273.89, and from the canals to \$15,329,362.83, making a total of \$209,606,636.72.

Details in tabulated form showing the general classes and directions of the above expenditures and revenues will be found in the statements of the accountant of the department, printed in the appendices, Part I herewith.

GOVERNMENT RAILWAYS IN OPERATION.

The Government railways are the Intercolonial, the Windsor Branch (maintained only and leased for operation), and the Prince Edward Island Railway.

By an Order in Council, dated May 5, 1913, "The Government Railways Managing Board," by whom the operations of these railways had been conducted since the 1st of April, 1909, was abolished, and their supervision and direction was placed in the hand of a "General Manager of Government Railways," Mr. F. P. Gutelius being appointed to that position as from May 1, 1913.

Details respecting these railways and their operation will be found in the appendices, Part III, containing reports from the General Manager and the officials of these roads.

The Intercolonial Railway operations resulted in a profit of \$179,362.78, but this sum, at the close of the year, was transferred to the Equipment Renewal Account, and was expended as part of the working expenses, making their total \$12,867,249, to which is to be added \$11,300 paid under special votes, as compassionate allowances, making the total \$12,878,549. The total earnings amounted to \$12,878,549.

The Windsor Branch maintenance expenditure amounted to \$26,486.98; the Government share of the earnings credited to the branch amounted to \$61,517.52, leaving a profit of \$35,030.54.

The Prince Edward Island Railway working expenses amounted to \$571,415.37, its earnings amounted to \$409,616.74, the deficit being \$161,798.63.

†This amount does not include the annual payment of \$119,700 to the provincial government of Quebec being interest at the rate of 5 per cent on the sum of \$2,394,000 up to 1905, granted by 47 Victoria, ch. 8 (1884), nor the annual payment of \$107,730, being interest at the rate of 4½ per cent since and including 1905, on the said sum of \$2,394,000, for the line between Ottawa and Quebec, which sum was transferred to the public debt as a liability, and is dealt with by the Finance Department. (See Public Accounts, 1893-4, page 10, and 1906, page 79.)

INTERCOLONIAL RAILWAY.

This railway extends from the Atlantic ocean ports of Halifax, St. John, Sydney, and North Sydney, to Montreal.

On March 1, 1898, the operations of the Intercolonial, the westerly limit of which previously was Lévis, opposite Quebec, were extended to Montreal by means of leases obtained from the Grand Trunk and Drummond County Railway Companies, making an addition of 169.81 miles to the operation of the Government line.

The leasing agreement for an undivided half share or interest, made with the Grand Trunk Railway Company, and dated February 1, 1898, was confirmed, with modification, by the Act 62-63 Vic., chap. 5 (1899). It covers the distance between Ste. Rosalie station and the city of Montreal, with termini in that city, also the Jacques Cartier junction, the Chaudiere bridge and its approaches, and the use of the Victoria bridge over the River St. Lawrence above Montreal. Its term extends for a period of ninety-nine years from March 1, 1898, renewable, in like terms of ninety-nine years each, forever; the annual rental being fixed at \$140,000.

Under authority of the Act 62-63 Vic., chap. 6 (1899), the Drummond County railway from Chaudiere to Ste. Rosalie, together with the branch from St. Leonard to Nicolet, was acquired by the Dominion; conveyance being made by a deed dated November 7, 1899.

On October 1, 1904, the Canada Eastern railway from Gibson to Loggieville, 123.67 miles, was purchased, and on April 19, 1905, the mortgaged Fredericton and St. Mary's bridge, with connected property, 1.33 mile, was surrendered to the Government.

In September, 1911, the branch line, 12.52 miles long, from Ferrona Junction to Sunny Brae, was acquired and operated.

The length of the railway main line is 1,457.77 miles. 26.09 miles are double-tracked. There are of passing sidings 134.37 miles, and of other sidings and spurs 347.59 miles.

FINANCIAL STATEMENTS.

CAPITAL. ACCOUNT EXPENDITURE.

The expenditure on capital account during the fiscal year ended March 31, 1914, amounted to \$4,331,999.88, against which there are credits amounting to \$2,305.20, making the net expenditure of the year, \$4,329,694.68, and bringing the total capital expenditure on the whole railway as amalgamated under the Acts 54-55 Vic., chap. 50 (1891), and 62-63 Vic., chaps. 5 and 6 (1899), together with the acquired Canada Eastern Railway, up to \$101,467,501.85.

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The principal items charged to capital during the year were as follows (omitting cents):—For new terminal facilities at Halifax, \$1,033,834; for rolling stock, \$993,380; for strengthening bridges, \$134,582; for increased accommodation and machinery at Halifax, \$107,485; for locomotive and car shops with equipment at Moncton, \$132,170; for Sydney Mines diversion, \$17,306; for diversion at Chatham and Branch to wharf, \$45,271; for increased accommodation at Truro, \$91,008; for increased accommodation along the line, \$128,203; for improvements at Point Tupper, \$69,842; for surveys and inspections, \$40,000; for increased accommodation at St. John, \$20,000; for docks and wharfs at Halifax, \$308,769; for improvements at Lévis, \$58,025; towards the construction of the Dartmouth to Deans railway, \$700,656; for safety appliances for equipment, \$17,289; for installation of telephone system for operating trains, \$39,270; for installation of block system for operation, \$55,183; for double-tracking Chaudière curve to St. Romuald, \$43,098.

REVENUE ACCOUNT EXPENDITURE.

The expenditures on revenue account—working expenses—are grouped, as usual, under five main heads, each divided into a number of sub-heads.

These expenditures for the fiscal year ended March 31, 1914, were as follows:—Maintenance of way and structures, \$2,191,321.96, against which is a credit of \$7,944.07, for maintaining joint tracks, yards and other facilities, leaving the net amount, \$2,183,377.89; maintenance of equipment, \$2,802,488.70; traffic expenses, \$283,268.01; transportation expenses, \$7,340,844.64, against which is a credit of \$52,982.18, for operating joint yards and terminals, leaving the net amount, \$7,287,862.46; general expenses, \$301,251.94. The aggregate of the expenditures under these five heads for the year was \$12,867,249; adding to which \$11,300 paid as “compassionate allowances,” under special votes, the total is \$12,878,549.

In the above expenditures, there were included the following items (omitting cents):—Maintenance of Way and Structures: for ties, \$279,719; for rails, \$178,024; for other track materials, \$127,445; roadway and track, \$757,218; removal of snow and ice and sand, \$125,210; and buildings, fixtures and grounds, \$285,509. Maintenance of Equipment: for repairs to locomotives, \$890,397; renewals of locomotives, \$213,050; for repairs to passenger cars, \$317,607; renewals to passenger cars, \$106,524; for repairs to freight cars, \$860,932; for renewals of freight cars, \$159,787. The traffic expenses included, for advertising, \$48,632; and for outside agencies, \$119,724. The transportation expenses included: for station employees, \$881,369; yard conductors and brakemen, \$209,156; for yard enginemen, \$182,696; for fuel for yard engines, \$44,509; engine house expenses, \$182,696; for road enginemen, \$791,114; for road trainmen, \$920,660; and for fuel for road engines, \$2,279,326. The general expenses included salaries and expenses of clerks and attendants, \$127,685; and pensions, \$94,335.

Details of expenditure will be found in the report of the Comptroller, Part III, of the appendices.

GENERAL NOTES.

The gross earnings of the railway for the year amounted to \$12,878,549, derived as follows:—

The passenger earnings were \$3,674,878.75; the freight earnings, \$8,469,590.33; the mail and express earnings and miscellaneous, \$734,079.92.

The total engine mileage was 10,234,923; the total train mileage was 8,344,470; and the total car mileage, 122,815,218.

The gross earnings per mile of railway (1,456.97 miles) were \$8,839.27; per engine mile, \$1.43; per train mile, \$1.54; and per car mile, 10.49 cents.

The expenses per mile of railway were as follows: Maintenance of way and structures, \$1,498.57; maintenance of equipment, \$1,923.51; traffic expenses, \$194.42; transportation expenses, \$5,002.07; general expenses, \$212.94.

The expenses per train mile were: Maintenance of way and structures, 26.16 cents; maintenance of equipment, 33.58 cents; traffic expenses, 3.39 cents; transportation expenses, 87.36 cents; general expenses, 3.71 cents; total, 154.20 cents.

The ratio of expenses to gross earnings was as follows: Maintenance of way and structures, 16.95 per cent; maintenance of equipment, 21.76 per cent; traffic expenses, 2.20 per cent; transportation expenses, 56.59 per cent; and general expenses, 2.41 per cent.

Comparing the earnings for the twelve months ended on March 31, 1913, with the corresponding period ended March 31, 1914, the gross earnings for the latter year show an increase of \$894,066.31. The passenger traffic produced an increase of \$191,431.43; the freight traffic an increase of \$440,530.20; the mails, express traffic and miscellaneous, an increase of \$216,804.68. The increase per mile of railway was \$676.29, and per train mile 7 cents.

The number of passengers carried was 3,983,511, an increase compared with the previous year of 220,396. There was an increase of 189,071 in the number of local passengers, and of 31,325 in the number of through passengers.

Of revenue producing freight 5,287,740 tons were carried, an increase, compared with the previous year, of 84,271 tons. The local freight decreased 129,795 tons, and the through freight increased 214,066 tons.

Details of the principal items of this freight will be found in the statements of the Comptroller, Appendix III, classified as follows; Products of agriculture, 568,659 tons; animals and their products, also poultry, game and fish, 127,739 tons; products of mines, 1,634,208 tons; products of forest, 1,347,466 tons; manufactures, immigrants' effects, and miscellaneous, 1,609,668 tons.

The rolling stock equipment will be found specifically described in the report of the mechanical accountant in appendix, Part III. Included in the purchases of the year were 38 locomotives (4 passenger, 25 freight, and 9 switching), all bought on

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capital account and one bought on renewals account (revenue). The number of locomotives on March 31, 1914, was 388.

The value of stores on hand at the close of the year was \$2,179,882.08, comprising ordinary stores and fuel, \$1,380,126.64; roadway and bridge material, \$799,755.44.

COMPARATIVE STATISTICS—YEARS 1912-13 AND 1913-14.

In 1912-13 the average tons of freight carried per train, producing revenue, was 272.08 and the number of passengers, 65.03; in 1913-14 the average freight tonnage was 270.75, and passenger, 68.88.

In 1912-13 the average tons per loaded car, producing revenue, was 18.00, and the number of passengers, 9.69; in 1913-14 the number of tons was 17.83, and of passengers, 9.78.

The number of tons per train, all freight, in 1912-13, was 276.27, and 1913-14, 275.74.

The number of tons per car, all freight, in 1912-13, was 18.27, and 1913-14, 15.06.

The average distance each ton of freight was carried in 1912-13 was 269.53 miles, and in 1913-14, 263.38. The average distance passengers were carried in those years was 51.72 miles and 53.43, respectively.

The average number of loaded cars per train in 1912-13, was 15.12 cars of freight, and 6.71 cars of passengers; in 1913-14 the number of freight cars per train was 15.18 and of passengers, 7.04.

The average number of empty cars per train in 1912-13 was 2.52, and in 1913-14, 3.13.

In 1912-13 the average of train miles per mile of road was, for freight trains, 3,510.99, and for passenger, 2,038.73; in 1913-14 these figures were, respectively, 3,606.74 and 2,120.54.

In 1912-13 the average per mile of road of revenue producing freight carried one mile, was 955,261.74 tons, and passengers, 132,569.26; in 1913-14 the figures were, freight, 976,507.62 tons, and passengers, 146,052.63.

The number of tons all freight, per mile of road, carried one mile in 1912-13, was 969,998.91, and in 1913-14, 994,519.93.

The train mileage in 1912-13 was: passenger, 2,993,156 miles; freight, 5,154,663 miles; in 1913-14: passenger, 3,089,559 miles; freight, 5,254,911 miles.

The loaded car mileage in 1912-13 was 77,932,195 miles, and in 1913-14, 79,794,405 miles.

The empty car mileage in 1912-13 was 12,978,505 miles, and in 1913-14, 16,439,758 miles.

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The caboose car mileage in 1912-13 was 4,792,595 miles, and in 1913-14, 4,831,573 miles.

The total car mileage in 1912-13 was: passengers, 20,083,733 miles, and freight, 95,703,295 miles; in 1913-14 the figures were: passenger, 21,749,482, and freight, 101,065,736.

The total freight moved in 1912-13 was: 5,372,938 tons; of this quantity 5,203,469 tons were revenue producing. In 1913-14 the total freight moved was 5,501,582 tons, of which 5,287,740 tons were revenue producing.

Repairs to passenger cars cost, per car, in 1912-13, \$623.93; or per car mile, 1.48 cents; and in 1913-14, \$606.12, or per car mile, 1.46 cents.

Repairs to freight cars cost, per car, in 1912-13, \$52.85, or per car mile, .68 of a cent; and in 1913-14, \$64.37, or per car mile .85 of a cent.

Repairs to locomotives cost, per locomotive, in 1912-13, \$2,062.62, or per locomotive mile, 7.68 cents; and in 1913-14, \$2,294.84, or per locomotive mile, 8.70 cents.

WINDSOR BRANCH.

The road is 32 miles in length. It extends from Windsor Junction on the Intercolonial railway, to Windsor, N.S.

The railway is operated by the Dominion Atlantic Railway Company, formerly the Windsor and Annapolis Railway Company. The company pay all charges in connection with the working of the traffic, two-thirds of the gross earnings being allowed them, the Government taking the remaining one-third, and assuming all cost of maintenance of the road and works. This arrangement is carried out under an agreement dated December 13, 1892, which extends for a further term of twenty-one years, arrangements similar to those made in 1871.

This agreement expired on December 31, 1913. The company, however, have been allowed to continue operation pending new arrangements.

All charges for superintendence and supervision of maintenance of work are borne by the Government; the duty of supervision is performed by the chief officers of the Intercolonial Railway.

The Government share of the earnings for the twelve months ended on March 31, 1914, amounted to \$61,517.52, a decrease compared with the previous year of \$6,729.18. The decrease was in freight traffic, the passenger traffic having increased. The cost of maintenance was \$26,486.98, leaving the net Government earnings \$35,030.54.

PRINCE EDWARD ISLAND RAILWAY.

This is a narrow gauge railway, 3 feet 6 inches. It extends from Tignish to Georgetown, 158.60 miles, and from Charlottetown to Murray Harbour, 52.30 miles, with branches to Souris, Elmira and Cape Traverse. The length of the road operated was 275.2 miles.

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CAPITAL ACCOUNT.

There was an addition of \$129,574.95 to the expenditure on capital account during the year ended on March 31, 1914, making the total capital expenditure \$8,920,369.01. The principal item was \$117,412.30 for the car ferry between Cape Traverse, P.E.I., and Cape Tormentine, on the mainland.

REVENUE ACCOUNT.

The gross earnings amounted to \$409,616.74, and the working expenses to \$571,415.37, leaving a deficiency of \$161,798.63. Compared with the previous year, there was an increase of \$20,142.67 in the gross earnings, and an increase of \$81,443.03 in the working expenses.

The expenditure on revenue account (working expenses) is classified, as on the Intercolonial, under five heads, with their several sub-heads. It is comprised in the following:—Maintenance of way and structures, \$160,334.29; maintenance of equipment, \$95,622.05; traffic expenses, \$5,943.46; transportation expenses, \$292,182.66; and general expenses, \$17,332.91.

The number of passengers carried was 445,739, an increase compared with the previous year of 11,851, and this traffic produced \$183,649.79, an increase of \$12,301.22. Of freight, 115,751 tons were carried, a decrease of 7,033 tons. The freight earnings amounted to \$184,004.11, an increase of \$3,657.80. The earnings from mail and sundries amounted to \$41,962.84, an increase of \$4,184.65.

The freight carried was: Agricultural products, 32,013 tons; animals, poultry, fish and their products, 16,621 tons; products of mines, 16,989 tons; products of forests, 13,835 tons; manufactures, household goods, furniture and miscellaneous, 36,293 tons.

The engine mileage was 461,618 miles; the train mileage, 317,169 miles; the car mileage, 2,313,513 miles.

The gross earnings per mile of railway amounted to \$1,478.76; per engine mile, 98 cents; per train mile, 129 cents; and per car mile, to 17.71 cents.

The working expenses per mile of railway aggregated \$2,062.87, and per train mile, 180.16 cents.

The value of stores on hand on March 31, 1914, was \$67,669.97, comprised in fuel, \$19,392.95; road material, \$14,667.07; and miscellaneous, \$33,609.95.

Details will be found in the reports of the Comptroller and of other officers, in the appendices, Part III.

GOVERNMENT RAILWAYS PROVIDENT FUND.

The Act of 1907, chap. 22, establishing a fund to be known as "The Intercolonial and Prince Edward Island Railway Employees' Provident Fund," came into effect on April 1, 1907. The main feature is that a contribution of 1½ per cent of each month's salary and wages is made by each employee to the fund, to which a like

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amount is added by the railway to the limit of \$100,000 a year. Interest at 3 per cent per annum is allowed on the employee's contribution. On retirement, after a certain length of service, the employee will receive for the rest of his life a monthly allowance for each year of his service, equal to $1\frac{1}{2}$ per cent of his average monthly salary or wages for the preceding eight years; the minimum allowance to be \$20 a month, and the maximum two-thirds of his said average monthly pay. In the event of the death of a contributor to the fund while still in the service, his widow, children or relatives may be paid a sum equal to 90 per cent of his total contributions. The fund is administered by a board of five persons, three of whom are officers of the railway, the remaining two being elected annually by the contributing employees. The Act was amended by the Act of 1908, chap. 37, and again by the Act of 1909, chap. 20. Under this last, the Government Railways Managing Board nominates one of its members as chairman of the Provident Board.

The seventh annual report of the Board, which is printed in Appendix III hereto, shows that at the beginning of the fiscal year, April 1, 1913, there was a balance to the credit of the fund of \$346,028.57, and that during the past fiscal year, the contributions of the railway employees amounted to \$99,805.03. Adding to this a like contribution from the Government railways, and the sum of \$1,236 for refunds, etc., together with interest accrued, \$10,048.32, the total of the fund for the year aggregated \$556,922.95. The total expenditure during the year was \$167,701.19, of which \$152,674.81 was paid out in retiring allowances and \$6,369.75 for contributions refunded, leaving at the credit of the fund on March 31, 1914, the sum of \$389,221.76.

In the course of the year 108 employees were retired and pensioned, and 37 pensioners died.

During the seven years that the system has been in operation the total contributions by employees amount to \$565,550.34, and a like sum being added by the railways makes the total \$1,131,100.68. Six hundred and forty-nine employees have been pensioned, of whom 164 have died, leaving 485 in enjoyment of their allowances at the close of the fiscal year 1914. The total paid out for retiring allowances is \$723,969.03.

HUDSON BAY RAILWAY.

During the past fiscal year, closed on March 31, 1914, the track has been laid for the first 102 miles from The Pas, and of this distance 56 miles have been fully ballasted and surfaced. Grading has been practically completed up to the 150th mile, and the right of way cleared up to the first crossing of the Nelson river, or for a distance of 242 miles.

At Port Nelson, work is in progress. Plant, materials, supplies and men were forwarded at the opening of navigation in 1913. Housing accommodation for the men and supplies has been built, and drainage works and construction railways carried out. A radio telegraph station has been installed, and brought into operation. Connection has been made by a tote road between Port Nelson and the end of the railway.

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The bridge over the River Saskatchewan at The Pas was completed. This bridge consists of four fixed spans, and one swing span.

The work of construction for the first 185 miles, from The Pas to Thicket Portage, was placed under contract in August, 1911. A contract for a further distance of 68 miles, from Thicket Portage to Split Lake Junction, was let on September 20, 1912, and a third contract, covering the distance, 165 miles, from Split Lake Junction to Port Nelson, on December 17, 1912. The total distance is 418 miles.

The expenditures during the year aggregate \$4,498,717.25, bringing the total expenditure up to \$6,087,032.67.

The reports of the Engineer in Charge and of the Chief Engineer will be found in the appendices, and a number of interesting photographs at the end.

NATIONAL TRANSCONTINENTAL RAILWAY.

Under an agreement, dated July 29, 1903, ratified by the Dominion Act of that year, chap. 71, and under a modifying agreement dated February 18, 1904, ratified by the Act of that year, chap. 24, the Grand Trunk Pacific Railway Company, a company incorporated by the Act of 1903, chap. 122, have undertaken certain obligations in respect of the construction and operation of a line of railway, wholly upon Canadian territory, between the city of Moncton, in the province of New Brunswick, and the navigable waters of the Pacific ocean. The railway is composed of two divisions, namely, the eastern division, between Moncton and Quebec, thence westerly through the northern part of the provinces of Quebec and Ontario, and, in the province of Manitoba, to the city of Winnipeg, and the western division, between Winnipeg and the Pacific ocean. The eastern division is being constructed by the Government under commissioners appointed by the Governor in Council, and on completion is to be leased to and maintained and operated by the company, who undertake to construct, at their own cost, and maintain and operate, the western division. The lease of the eastern division is to be for a period of 50 years, at a rental of three per cent per annum upon the cost of its construction; the first seven years of the term to be free of rent; both divisions are to be equipped by the company, the first equipment to be of a value of not less than \$20,000,000.

By way of assistance to the company in the construction of the western division, it is provided that the Government shall guarantee payment of the principal and interest of an issue of bonds to be made by the company for an amount sufficient to produce a sum equal to 75 per cent of the cost of its construction; this amount is not to exceed \$13,000 per mile in respect of the prairie section from Winnipeg to the eastern limit of the Rocky Mountains (such limit to be established by the Chief Engineer of the company and the Chief Engineer of the Government, as the result of actual surveys). This limit has been established as the east bank of Wolf creek, a point 120 miles west from Edmonton.

By the Act of 1905, chap. 98, three deeds of trust by way of mortgage, set out in the said Act, were ratified and confirmed, namely, one dated June 10, 1905, between the Grand Trunk Pacific Railway Company, the Royal Trust Company, and His Majesty, to secure the issue of first mortgage bonds; the second dated March 15, 1905, between the Grand Trunk Pacific Railway Company, the National Trust Company, and the Grand Trunk Railway Company, to secure the issue of second mortgage bonds, and the third, also dated March 15, 1905, between the Grand Trunk Pacific Railway Company, the National Trust Company, and the Grand Trunk Railway Company, to secure the issue of first mortgage bonds in respect of the branch line designated as the "Lake Superior Branch."

Payments from the proceeds of the bonds of the company for work done, etc., on the western division, are made from time to time on certificates given by the Government Chief Engineer of this division, showing approved expenditures.

By the Act of 1909, chap. 19, authority was given for aiding in the completion of the construction of the "prairie" section by a loan to the company of \$10,000,000, to be secured, as collateral, subject to any prior lien, by a mortgage on the "prairie" section of their road; such loan to bear interest at the rate of 4 per cent per annum, and to be repayable in ten years.

This loan, which is dealt with by the Finance Department, was duly made; the mortgage deed being dated May 22, 1909.

By the Act of 1913, chap. 23, authority was given for a loan to the company not exceeding \$15,000,000, at 4 per cent interest, the loan being repayable by July 1, 1923. Under this authority, \$15,000,000 has been advanced to the company. Its debentures to an equal amount have been taken by the Government in pledge as security for this loan, as provided by the Act.

By the Act of 1913, chap. 24, authority was given for the purchase of 3 per cent bonds of the company to the extent of the balance of the authorized issue. Such balance to the amount of £6,800,000 has been purchased by the Government.

The several Government expenditures on the Eastern Division are to be made from appropriations by Parliament for the purpose, and on the recommendation of the Minister of Railways and Canals, to whom accounts of all receipts, expenditures and liabilities are to be furnished monthly.

The Board of Commissioners are required to furnish annually a report to the Governor in Council, through the Minister of Railways and Canals, showing the receipts and expenditures of the year, and other information as to the railway, which report is to be submitted to Parliament.

The headquarters of the Board are in the city of Ottawa.

By various Acts and Orders in Council, the time for completion has been extended, and by the Act of 1914 (the Grand Trunk Pacific Railway Guarantee Act), sec. 11, it was provided that "notwithstanding anything contained in the said trust deed of

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tenth of June, 1905, or in any Act or Order in Council heretofore passed, the date for completion of the western division shall be the 31st of December, one thousand nine hundred and fifteen." By sec. 2 of this Act, the "Western Division" was defined as extending from the city of Winnipeg to the Pacific ocean.

By the Act of 1912, chap. 39, the construction of the Eastern Division, and its operation, until completed and leased to the Grand Trunk Pacific Railway Company, was placed under the charge and control of one commissioner (in place of four) to be appointed by the Governor in Council, and to hold office during pleasure. By an Order in Council, dated April 4, 1912, Mr. R. W. Leonard, C.E., the Chairman of the Commission as then existing, was appointed as such commissioner.

The report of the Board for the fiscal year ended March 31, 1914, has been prepared, and will be laid before Parliament in due course.

The following summary shows the position at the close of the year.

EASTERN DIVISION,

(Moncton to Winnipeg.)

The total mileage from Moncton, N.B., to the west side of Water street, Winnipeg, is 1,804.52 miles. This, however, includes the Quebec bridge over the River St. Lawrence, in course of construction, the length of which will be 1.10 mile. Track laying between Moncton and Winnipeg was completed (with the exception of the Quebec bridge) in November, 1913, the last spike being driven on the 17th of that month.

Pending the completion of the Quebec bridge, the communication across the river will be made by a train ferry which has been built in England, and was launched in January, 1914.

Up to March 31, 1914, the track was laid in the main line for a distance of 1,803.42 miles, together with 423.26 miles of sidings and yards, to which is to be added for double-track and the line from the Quebec bridge to Quebec, 20.79 miles, making a total of 2,247.47 miles of track. The bridges were completed to the extent of 97.2 per cent.

The total expenditures by the commissioners during the fiscal year ended March 31, 1914, on the entire Eastern Division, amounted to \$12,684,663.16, making their total expenditure from the date of their organization in September, 1904, to that date, \$142,967,999.02, which includes \$36,182.91 for operation in the year 1912-13 of the section from Moncton to Edmundston, N.B.

During the year, from May 1, 1913, to March 31, 1914, the road was operated to a limited extent by the Intercolonial railway, for the distance, 285.25 miles, between Moncton, N.B., and Escourt, P.Q., a point 54.85 miles west of Edmundston, N.B. Details will be found in the statements of the Comptroller and Treasurer of Government Railways, herewith (Appendix Part III.)

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Detail summaries of their expenditure are furnished by the Chief Accountant of the Commission. They show the total for the past fiscal year to be made up as follows:—Headquarters, \$172,068.60; construction, \$12,506,730.14; and transport, \$5,864.42.

The total expenditure from September, 1904, to March 31, 1914, was as follows:—Construction, \$137,140,638.66; location, \$2,943,328.85; transport, \$1,030,901.41; headquarters, \$1,816,947.19; and operation, \$36,182.91.

The statement of the Accountant of the Department (Part I, of the appendices hereto) shows the expenditure on the Eastern Division for the year ended March 31, 1914, to be \$12,670,108.27,* and the total expenditure on this division up to that date \$142,970,793.19,** the expenditures yearly being as follows:—

1904..	\$ 6,249 40
1905..	778,491 28
1906..	1,841,269 95
1907..	5,537,867 50
1908..	18,910,449 41
1909..	24,892,422 68
1910..	19,968,126 86
1911..	23,488,208 40
1912..	21,110,683 05
1913..	13,766,916 39
1914..	12,670,108 27**
<hr/>	
Total..	\$142,970,793 19**

WESTERN DIVISION.

The western division extends from the western boundary of the Winnipeg terminals on the east bank of the River Assiniboine, in the city of Winnipeg, to the city of Prince Rupert, on the Pacific Coast, a distance of 1,745 miles.

It is divided into two sections, namely, the "Prairie Section," extending from Winnipeg to the east bank of Wolf creek—a point 120 miles west of Edmonton, the capital of the province of Alberta—a distance of 915 miles, and the "Mountain Section," which extends from the east bank of Wolf creek to Prince Rupert, a distance of 830 miles. The terminals will extend for a further distance of 3.23 miles around the water front of the city of Prince Rupert.

* The report of the National Transcontinental Railway Commissioners shows the expenditure of the year to be \$12,684,663.16, a difference of \$14,554.89. This is due to an adjustment made by the Departmental Accountant during the fiscal year, as follows:—

Cheques outstanding returned to Finance Department.	\$13,593 70
Refunds of credits on account of previous years.. . . .	961 19
	<hr/>
	\$14,554 89

** The report of the National Transcontinental Railway Commissioners shows a total of \$142,967,999.02, a difference of \$2,794.17. This difference is to be adjusted in 1914-15.

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This division is in course of construction by the Grand Trunk Pacific Railway Company, under the Government guarantee agreements above mentioned, and the Government Chief Engineer of the Division, on whose certificates payments are made to the company, is Mr. Collingwood Schreiber, C.M.G., whose report, showing the position of the work at the close of the fiscal year, March 31, 1914, will be found printed in the appendices hereto, Part IV.

Of this, the following is a brief summary:—

“PRAIRIE SECTION.”

Throughout the year, a well-equipped passenger and freight service has been carried on over the whole road from Winnipeg to Wolf Creek. The work done has been principally work of maintenance.

On this section the maximum grade against eastbound traffic is four-tenths of one per cent, and against westbound traffic five-tenths of one per cent.

“MOUNTAIN SECTION.”

The energetic prosecution of works on this section resulted in grading being sufficiently completed by the end of the fiscal year to enable rail connection to be made between the western and eastern tracks shortly after, giving rail trackage from Winnipeg to Prince Rupert, though there were temporary lines constructed around some unfinished cuttings, several pile bridges to be filled in, and certain steel bridges to be built, of which eleven were under construction, and ten not commenced; meantime, passage of trains was obtained by means of temporary pile bridges.

TOTAL EXPENDITURE.

The approved and certified expenditure, up to March 31, 1914, amounted, on the “Prairie Section,” to \$37,859,793.21, and, on the “Mountain Section,” to \$77,362,137.79, making a total of \$115,221,930.91.

QUEBEC BRIDGE.

On August 29, 1907, the cantilever bridge in course of construction over the River St. Lawrence by the Quebec Bridge and Railway Company (originally commenced under a subsidy of \$1,000,000 authorized by the Act of 1899, chapter 7, and a subsidy agreement, dated November 12, 1900), collapsed.

Under the terms of an agreement with the company, dated October 19, 1903, ratified by the Act of 1903, chapter 54, the Government had undertaken to guarantee the principal and interest of the bonds or other securities of the company to the limit of \$6,678,200, the company releasing claim to the balance remaining unpaid of the said subsidy, such guarantee to be secured by mortgage on the company's franchises, tolls and property. On February 1, 1904, a mortgage trust deed was executed, conveying to

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the Royal Trust Company (Montreal) as trustees, all the property and franchises of the company, and providing for the issue of bonds accordingly.

It was provided in this agreement that the Government should have the right at any time, on one month's notice, to take over the company's undertaking, assets, property and franchises, on paying the shareholders the amount of their stock at par, not exceeding \$265,555.70, with simple interest at 5 per cent and a premium of 10 per cent on the par value of the paid-up shares.

Of the said subsidy of \$1,000,000, there had been paid to the company a total of \$374,353.33 prior to the execution of above agreement, and, subsequent to its execution, payments were made from the proceeds of their bonds to the extent of \$5,016,453.66 on certificates of the Government engineer covering work done and materials delivered.*

After the collapse of the bridge, the right of the Government to take over the company's undertaking was exercised under the authority of an Order in Council of August 17, 1908. The date of assumption was December 1, 1908. The total of the amounts paid by the Government to the several shareholders for their shares was \$355,279.07, payment being made to the parties concerned in November, 1908. The deed of assignment and transfer from the company to the Government was dated October 18, 1909.

Under authority of an Order in Council of August 17, 1908, a board of three engineers was constituted for preparation of a new design and specification, and for the reconstruction of the bridge, with powers to call in expert engineers as advisers on points of difference that might arise.

In June, 1910, the formal call for tenders was made by newspaper advertisement. In response, 35 different propositions were submitted, which were duly considered by the board, who, finally, after calling in advisory engineers, recommended the acceptance of an alternative design sent in by the St. Lawrence Bridge Company (with whom are associated the Dominion Bridge Company and the Canadian Bridge Company). This design the board considered to possess certain features of strength, simplification of erection, economical distribution of material, and general appearance which, in their opinion, would produce a bridge that "would compare most favourably with the highest type of long-span bridges in existence." By an Order in Council of March 31, 1911, authority was given for entrance into contract with the conjoined companies named, and such contract was executed under date April 4, 1911. The contract price is 9.02 cents a ton, and will aggregate about \$8,650,000, a saving of about \$2,600,000, having been effected by the elimination of the highways for vehicular traffic contemplated in the original design; the contract date for completion is December 31, 1915.

The bridge when constructed will have a total length of 3,228 feet, or about three-fifths of a mile. The centre span will be 1,800 feet long; the length of the

* The history of the Government's connection with the bridge prior to its collapse is given in the Department Annual Report of 1907-8, p. xlvii.

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suspended portion of it will be 640 feet. This span will, for a length of 760 feet over the channel of the river, have a height of 150 feet between its lower members and the high water level of the river. The two cantilever arms will each be 580 feet long. The width of the bridge between trusses will be 88 feet. The bridge will comprise a double-track railway, and two sidewalks for foot passengers.

Under date of January 10, 1910, a contract for the substructure was entered into with Messrs. M. P. and J. T. Davis, whose tender was the lowest of three obtained after newspaper advertisement calling for tenders; and supplementary agreements necessitated by changes in the caisson design and in the location of the north anchor pier, were made with them on May 23, 1910, and September 2, 1911.

The Board of Engineers for reconstruction, as originally constituted, has been modified by retirements and is at present composed as follows:—Charles N. Mon-sarrat, M. Can. Soc. C.E., chairman and chief engineer; Ralph Mojeski, Am. Soc. C.E., and C. C. Schneider, Can. Soc. C.E., and past president Am. Soc. C.E.

The headquarters of the board are in Montreal.

The report of the chairman and chief engineer for the year ended on March 31, 1914, will be found printed in the appendices hereto, Part V.

The report shows that by March 31, 1914, the whole of the substructure had been completed with the exception of some cleaning and painting. The work done comprises 106,090 cubic yards of masonry, all faced with heavy granite blocks with a concrete backing, the main piers having 18 feet of solid granite on the top of each to distribute the loads. The work is stated to be very satisfactory. (It may be noted here that the contract was subsequently completed, and that the final estimate has been made showing that the actual cost has been \$2,376,756.23 or \$71,718.77 less than the engineer's original estimated cost).

As to the superstructure, he states that during the year the contractors, the St. Lawrence Bridge Company, have made steady progress, and that out of an estimated total weight of 65,000 tons of steel required, have manufactured 9,991 tons; that 7,484 tons have been delivered at the bridge site, 1,371 tons erected and partially erected, and 791 tons completely erected. The approach spans from the abutments to the anchor pier have been erected, and the 1,000-ton erection traveller was practically completed.

Some interesting photographs of the works will be found at the end of the departmental report.

The expenditure during the past fiscal year up to March 31, 1914, was \$2,604,105.61, paid out of capital, and making the total capital expenditure \$1,947,788.04, adding to which the expenditure from income, namely, for the year 1908-9, \$422,867.12 (in which is included the amount \$355,279.07 paid for acquiring the stock of the Quebec Bridge and Railway Company, and \$31,765.44, the expenses of the commission of inquiry into the causes of the collapse of the old structure), and for the year 1909-10, \$111,782.02 for the preparation of plans, etc., or a total of \$534,655.14, against which there is to be credited the sum of \$100,000 paid in 1910 to the Government by the

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Phoenix Bridge Company, the contractors for the original superstructure, in the final adjustment of claims arising out of the collapse, the total net cost to the Government up to March 31, 1914, is \$5,382,443.18. This is irrespective of the amount of subsidy, \$374,353.33 paid to the Quebec Bridge Company as above mentioned.

SUBSIDIZED RAILWAYS.

Information as to subsidized railways is given in the statements of the accountant and the law clerk of the department, respectively, which will be found in the appendices hereto. The accountant's statements show all payments made, year by year, since the beginning of the system of railway subsidies; the law clerk's statement shows the several subsidy agreements entered into during the past year, with certain details of the specification in each case.

The total payments made on subsidy account during the year ended March 31, 1914, amounted to \$19,036,236.77.

BOARD OF RAILWAY COMMISSIONERS FOR CANADA.

By the Act 3 Edward VII, chap. 58 (1903), amending and consolidating the law respecting railways, the Railway Committee of the Privy Council was abolished, and in lieu thereof a Board of Commissioners, under the above title, was created, to consist of three members (increased to six by the Act of 1908, chap. 62), to be appointed by the Governor in Council; this Act was brought into force on February 1, 1904, by proclamation, on the authority of an Order in Council, dated January 18, 1904, which also appointed certain persons as commissioners. By the Act of 1908, chap. 61, the jurisdiction of the board was extended to cover the operation of telegraph and telephone lines, and by the Act of 1908, chap. 62, certain amendments were made to its constitution and otherwise. By the Act of 1909, chap. 31, the board was empowered to determine the maximum price to be charged for electricity developed through water-powers leased from the Crown. An Act of 1910, chap. 50, amended certain provisions of the Railway Act regarding the powers of the board, and the Act of the same year, chap. 57, extended the jurisdiction of the board to cover the fixing by it of the tariffs of wireless telegraph and marine electric telegraphs or cables. The Act of 1911, chap. 22, gave powers to the board to require from railway companies the establishment of a staff of fire-rangers, modified the previous enactments regarding the disposal of electricity developed through Government leased water-powers, and amongst other enactments, made provision for action, through the board, to ensure the efficient operation of subsidized railways. The office of the board is at Ottawa, though it is authorized to hold sessions in any part of Canada. Its decisions and orders are final, subject to appeal to the Supreme Court upon questions of jurisdiction or law, and also to action thereon by the Governor in Council, in his discretion.

It is required to make, annually, a report of its proceedings, which report is laid before Parliament. The report for the year ended March 31, 1914, has been received, and will be laid before Parliament in due course.

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CANALS.

The total expenditure on the Dominion canals for the twelve months ended March 31, 1914, was \$4,583,558.85, comprising \$2,829,661.34 charged to capital; \$389,284.75 charged to income; \$745,220.81 for staff; and \$619,391.95 for repairs; the last two items being charged to revenue.

The balance of rentals due on April 1, 1913, was \$158,390.59. The rentals accrued during the year amounted to \$253,018.49, making a total of \$411,409.08. Of this amount, there was collected during the year a total, after deducting abatements aggregating \$16,371.09, of \$259,277.01. The balance remaining due on March 31, 1914, was \$135,760.98. It should be observed that, as a general rule, rentals are payable in advance, this fact accounting, to a considerable extent, for the large amount of rental due at the end of each year.

The total revenue collected amounted to \$380,188.06, the balance being made up of wharfage dues, fines, etc., and a total of \$62,875.61 derived from the operation of the Port Colborne grain elevator on the Welland canal.

No tolls are charged on any of the Dominion canals since 1903-4.

Summaries of these expenditures and receipts will be found in the statements furnished by the Accountant of the Department, printed in the appendices, Part I, of the present report.

The above figures relate to the fiscal year 1913-14, but very voluminous statistics relating to canal traffic, and various commercial statistics for the season of navigation of the year 1913, will be found in the "Canal Statistics," which are issued as a separate report.

The principal facts of these statistics, summarized, are as follows:—

The total traffic through the several canals of the Dominion for the season of 1913, amounted to 52,053,913 tons, an increase of 4,595,292 tons compared with the previous year. 335,799 passengers were carried, an increase of 43,532.

The following features of the principal canal traffic during the season of 1913 will be of interest:—

On the Welland canal, 3,570,714 tons of freight were moved, an increase of 718,799 tons. Of the total, 1,684,967 tons were agricultural products, and 337,927 tons were produce of the forest; of coal, 945,790 tons were carried; 3,484,651 tons were through freight, of which 2,553,542 tons passed eastward.

Of the through freight, Canadian vessels carried 2,511,211 tons, an increase of 621,983 tons, and United States vessels 973,440 tons, an increase of 75,981 tons.

The total through freight passed eastward and westward through this canal to United States ports was 525,333 tons, an increase of 109,577 tons, compared with the year 1912.

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The quantity of grain passed down the Welland and St. Lawrence canals to Montreal was 1,265,368 tons, an increase of 303,513 tons, as compared with the previous year; no transshipments have been made at Ogdensburg since 1903.

On the St. Lawrence canals, 4,302,427 tons were moved, an increase of 825,239 tons, of which 2,815,410 tons were eastbound through freight, and 671,472 tons westbound freight; 1,545,755 tons were agricultural products, 1,429,509 tons coal, and 660,226 tons forest products.

On the Ottawa River canals, the total quantity of freight moved was 365,438 tons, a decrease of 26,912 tons, of which 186,710 tons were produce of the forest.

On the Chambly canal, 555,602 tons were moved, a decrease of 62,813 tons, of which 337,331 tons were produce of the forest, and 120,035 tons of coal.

On the Rideau canal, 171,223 tons were carried, an increase of 11,090 tons; 27,331 tons being produce of the forest, and 14,784 tons of coal.

On the St. Peter's canal, 71,514 tons were carried, a decrease of 3,295 tons; 36,508 tons were coal.

On the Murray canal, 180,576 tons passed, an increase of 10,495 tons.

On the Trent canal, 55,800 tons were moved, a decrease of 21,350 tons, of which 50,812 tons were produce of the forest.

On the St. Andrew's lock, on the Red river, Manitoba, the volume of business was 81,295 tons.*

On the Sault Ste. Marie canal, the total movement of freight was 42,699,324 tons, being an increase of 2,999,669 tons. There were 8,285 passages of vessels, the number of lockages being 6,266. Of wheat, 131,827,467 bushels, and of other grain, 50,875,233 bushels were carried; 2,240,840 barrels of flour; 32,419,242 tons of iron ore; 4,153,351 tons of coal; and 25,261,000 feet board measure, lumber.

The report of the Chief Engineer of the department, and the reports of the officers under his immediate control, which will be found in Part VI of the appendices, give comprehensive information as to the several works under his charge, the principal of which are the Hudson Bay railway, the Trent canal, the new Welland Ship canal, and the terminals of the Intercolonial railway near Halifax.

RAILWAY STATISTICS.

The digest of the sworn statements of railway companies relating to their operations in Canada for the twelve months ended June 30, 1914, is prepared by the Departmental Comptroller of Statistics, and is issued as a separate report.

* T is work, which consists of a lock and dam on the Red river, about 15 miles north of Winnipeg, was built and is operated by the Department of Public Works. It affords communication between Winnipeg and lake Winnipeg. It is only mentioned here for statistical purposes.

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CANAL STATISTICS.

The traffic statistics of the Dominion canals for the season of navigation of 1913 are compiled under the direction of the same officer, and are also issued as a separate report.

I have the honour to be, sir,

Your obedient servant,

A. W. CAMPBELL,

Deputy Minister.

APPENDICES

PART I

STATEMENTS

OF THE

ACCOUNTANT OF THE DEPARTMENT

SHOWING.

EXPENDITURE ON RAILWAYS AND CANALS

(Including Subsidized Railways)

AND RECEIPTS

FOR THE YEAR 1913-14

AND PREVIOUS YEARS

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EXPENDITURE.

GENERAL STATEMENT of the Expenditure of the Department of Railways and Canals during the Fiscal Year ending March 31, 1914.

	\$	cts.	\$	cts.
TOTAL EXPENDITURE—as per Statements, pages 37 and 38.			16,830,211	50
Expenditure chargeable to Railways.	35,187,320	60		
" " Railways, General.	413,318	59		
" " Quebec Bridge.	2,604,105	61		
" " Railway subsidies.	19,036,236	77		
Total expenditure, Railways.			57,240,981	57
Expenditure chargeable to Canals.	4,392,847	39		
" " Canals, General.	190,741	46		
Total expenditure, Canals.			4,583,558	85
General expenditure.	5,671	08	5,671	08
Total expenditure.			61,830,211	50
CLASSIFICATION OF EXPENDITURE IN GENERAL—				
Capital Account.	27,079,862	10		
Revenue Account.	14,935,138	21		
Income Account.	778,974	42		
Consolidated Fund (railway subsidies) Income.	19,036,236	77		
Total expenditure.			61,830,211	50
CLASSIFICATION OF EXPENDITURE BY ACCOUNTS.				
<i>Railways.</i>				
Capital expenditure—Railways.	21,628,095	15		
" " Railways, General.	18,000	00		
Revenue expenditure—Railways.	13,559,225	45		
" " Railways, General.	11,300	00		
Income expenditure—Railways, General.	384,018	59		
<i>Quebec Bridge.</i>				
Capital expenditure—Quebec Bridge.	2,604,105	61		
<i>Railway Subsidies.</i>				
Consolidated Fund—Railway subsidies.	19,036,236	77		
Total expenditure on Railways, \$57,240,981.57.			19,036,236	77
<i>Canals.</i>				
Capital expenditure—Canals.	2,824,536	79		
" " Canals, General.	5,124	55		
Income	351,397	24		
" " Canals, General.	37,887	51		
Revenue	642,844	68		
" " Canals Staff.	102,376	13		
" " Canals Staff, General.	574,038	68		
" " Canals Repairs.	45,353	27		
" " Canals Repairs, General.			1,364,612	76
Total expenditure on Canals, \$4,583,558.85.				
General Expenditure—Income account.	5,671	08	5,671	08
Total expenditure.			61,830,211	50

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

W. C. LITTLE,
Accountant.

5 GEORGE V.. A. 1915

REVENUE.

GENERAL STATEMENT of the Revenue Received by the Department of Railways and Canals during the Fiscal Year ending March 31, 1914.

	\$	cts	\$	cts.
TOTAL REVENUE RECEIVED.....			13,774,505	43
Revenue from Railways.....	13,394,317	37		
" " Canals.....	380,188	06		
Total revenue as above			13,774,505	43
STATEMENT OF REVENUE RECEIVED, IN DETAIL.				
<i>Railways.</i>				
Intercolonial Railway.....	12,878,549	60		
Windsor Branch Railway.....	61,517	52		
	12,940,066	52		
Prince Edward Island Railway.....	409,616	74		
National Transcontinental Railway.....	44,634	11		
Total Revenue from Railways.....			13,394,317	47
<i>Canals</i>				
Welland Canal.....	70,702	86		
" " Elevator, Port Colborne.....	101,422	78		
Lachine Canal.....	150,897	84		
Beauharnois Canal.....	14,788	15		
Cornwall Canal.....	8,935	53		
Williamsburg Canal.....	2,691	00		
Soulanges Canal.....	3,521	00		
Chambly Canal.....	609	00		
Carillon and Grenville Canal.....	541	00		
Rideau Canal.....	6,570	60		
Trent Canal.....	18,461	42		
St. Peters Canal.....	2	00		
Sault Ste. Marie Canal.....	534	16		
Murray Canal.....	235	00		
Ste. Anne's Lock and Canal.....	274	72		
Chats Falls Canal.....	1	00		
			380,188	06
Total revenue received during fiscal year.....			13,774,505	43

* Operated in part only.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

STATEMENT of Expenditure on Canals for Year ending March 31, 1914.

Name of Work.	Chargeable to Capital.	Chargeable to Income.	Chargeable to Revenue.		Total Expenditure during year
			Staff.	Repairs.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Carillon and Grenville.....		10,464 53	26,452 76	12,199 42	49,116 71
Chambly.....	2,697 03	10,314 09	35,155 28	39,712 20	87,878 60
Cornwall.....		45,537 81	83,018 63	53,039 73	181,596 17
Lachine.....	358,443 93	29,962 15	97,547 54	110,123 84	596,077 46
Murray.....		3,814 88	5,669 45	4,220 02	13,704 35
Rideau.....	40,000 00	27,094 80	60,471 38	102,092 68	229,658 86
Sault Ste. Marie.....	6,874 27		28,537 49	26,426 47	61,838 23
Soulanges.....	81,235 56	16,117 84	38,904 16	25,383 32	161,640 88
Ste. Anne's Lock.....		7,379 94	2,896 86	6,799 35	17,076 15
St. Ours Lock.....	1,384 63	1,364 71	4,599 36	2,015 86	9,364 56
St. Peters.....		48,455 79	5,251 36	618 88	54,326 03
Trent.....	1,146,383 31	38,259 19	48,777 82	54,184 46	1,287,604 78
Welland.....	192,346 90	77,476 08	173,368 13	102,520 46	545,711 57
Welland Ship Canal.....	994,257 60				994,257 60
Williamsburg.....		2,000 00	32,194 46	34,701 99	68,896 45
" Galops.....	913 56				913 56
" Farran's Point.....		11,620 58			11,620 58
" Rapide Plat.....		21,534 85			21,534 85
GENERAL ON CANALS.	2,824,536 79	351,397 24	642,844 68	574,038 68	4,392,817 39
Dredge vessels, Lachine.....				8,406 01	8,406 01
Dredge vessels, Rideau.....				24,120 60	24,120 60
Miscellaneous.....			2,529 27	789 08	3,318 35
Gratuities, Civil Service Act 1908.....		3,114 75			3,114 75
Statistical Officers.....			35,961 20		35,961 20
Sunday Labour.....			42,440 80		42,440 80
Surveys and Inspections.....		23,507 27			23,507 27
Improving Canal grounds.....				9,887 23	9,887 23
Quebec Canals.					
New dump scow.....	4,999 55				4,999 55
Protection walls north and south side Lake St. Francis.....		5,933 66			5,933 66
Concrete facing for dam at Valleyfield.....		278 80			278 80
Dredging.....		5,053 03			5,053 03
Maintenance.....			20,944 86		20,944 86
Hungry Bay Dyke repairs.....				2,150 35	2,150 35
Compassionate allowance to the widow of the late David Daoust, Soulanges.....			500 00		500 00
Miscellaneous.					
To pay claim of Joseph Gervais for damages to Island on the Ottawa river.....	125 00				125 00
	5,124 55	37,887 51	102,376 13	45,353 27	190,741 46
	2,829,661 34	389,284 75	745,220 81	619,391 95	4,583,558 85

Total on Canals—\$4,583,558.85.

5 GEORGE V., A. 1915

EXPENDITURE ON RAILWAYS.

Name of Work.	Chargeable to Capital.	Chargeable to Income.	Chargeable to Revenue.	Total.
			Working Expenses.	
RAILWAYS.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Intercolonial.....	4,329,694 68		12,867,249 00	17,196,943 68
National Transcontinental.....	12,670,108 27		94,074 10	12,764,182 37
Prince Edward Island.....	129,574 95		571,415 37	700,990 32
Windsor Branch.....			26,486 98	26,486 98
Hudson Bay.....	4,498,717 25			4,498,717 25
Quebec Bridge.....	2,604,105 61			2,604,105 61
	24,232,200 76		13,559,225 45	37,791,426 21
RAILWAY SUBSIDIES.		19,036,236 77		19,036,236 77
GENERAL ON RAILWAYS.				
Purchase of official car.....	18,000 00			18,000 00
Railway Commission—Maintenance.....		160,052 06		160,052 06
“ “ Statutory.....		54,381 53		54,381 53
“ “ Cases.....		49,173 30		49,173 30
Surveys and Inspections.....		71,467 63		71,467 63
Railway Grade Crossing Fund.....		39,968 11		39,968 11
Attendance, repairs and alterations to Governor General's car.....		878 63		878 63
To pay expenses in connection with consolidation of Railway Act.....		1,000 00		1,000 00
Contribution of Government Railways to the Faculty of McGill University.....		2,500 00		2,500 00
Contribution of Government Railways to Polytechnic School, Montreal.....		2,500 00		2,500 00
Remuneration to Government Director, Grand Trunk Pacific Railway.....		2,000 00		2,000 00
Subscription to International Congress, Brussels.....		97 33		97 33
Compassionate allowance to—				
Mrs. H. R. Hale I.C.R. (special vote).....			1,700 00	1,700 00
Mrs. G. Begin I.C.R. (special vote).....			1,000 00	1,000 00
Mrs. P. M. McGill, I.C.R. (special vote).....			1,000 00	1,000 00
Mrs. J. Clarke, I.C.R. (special vote).....			1,000 00	1,000 00
Mrs. H. A. Northrop, I.C.R. (special vote).....			2,000 00	2,000 00
Mrs. S. C. Tuttle, I.C.R. (special vote).....			2,000 00	2,000 00
Mrs. J. Bouchard, I.C.R. (special vote).....			2,000 00	2,000 00
Compensation to Douglas Anderson, I.C.R. (special vote).....			300 00	300 00
Compensation to D. Collins, I.C.R. (special vote).....			300 00	300 00
Total.....	18,000 00	384,018 59	11,300 00	413,318 59
Total on Railways.....	24,250,200 76	19,420,255 36	13,570,525 45	57,240,981 57
Grand total on Railways, including Quebec Bridge, \$57,240,981.57.				
MISCELLANEOUS EXPENDITURE.				
Cost of litigation.....		2,127 55		2,127 55
Miscellaneous investigations under Inquiries Act.....		3,543 53		3,543 53
Total.....		5,671 08		5,671 08
Grand total on Railways and Canals, including miscellaneous expenditure.....	27,079,862 10	19,815,211 19	14,935,133 21	61,830,211 50

Total amount of expenditure, \$61,830,211.50.

W. O. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, Ordinary Repairs and Working Staff up to March 31, 1914.

BAIE VERTE CANAL.

	Year ending.	Capital.	Income.
		\$ cts.	\$ cts.
Government expenditure since Confederation.....	1871		17,929 34
" " ".....	1872		6,399 41
" " ".....	1873		14,943 83
" " ".....	1874		4,018 90
" " ".....	1875		443 00
" " ".....	1876		110 75
" " ".....	1877		22 30
" " ".....	1878		
" " ".....	1879		
" " ".....	1880		
" " ".....	1881		520 00
Total.....			44,387 53

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

BEAUHARNOIS CANAL. †

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation		1,611,424 11			
“ since	1868		63,193 75	9,349 99	6,216 98
“	1869		55 00	9,626 99	6,498 57
“	1870		27 50	10,117 57	6,384 81
“	1871			12,316 53	5,722 36
“	1872		27 50	11,792 46	15,733 38
“	1873		5,122 50	12,210 73	9,882 06
“	1874		26 00	15,392 51	10,990 56
“	1875		36 00	14,399 32	12,253 01
“	1876			14,465 86	17,170 83
“	1877			14,377 63	15,207 36
“	1878			14,383 37	9,861 05
“	1879			15,015 86	10,370 71
“	1880	266 15		15,362 61	8,997 34
“	1881			17,659 93	10,770 67
“	1882			18,804 53	20,813 86
“	1883		6,727 44	18,287 77	15,826 71
“	1884		3,277 98	19,107 38	16,232 61
“	1885		7,999 79	18,960 40	14,637 70
“	1886		8,491 80	19,228 90	14,356 00
“	1887		3,633 57	18,867 45	14,999 88
“	1888		14,411 97	19,325 05	14,285 98
“	1889		10,993 52	20,019 11	14,982 54
“	1890			19,847 42	14,999 20
“	1891		17,085 68	18,886 86	12,537 39
“	1892		1,696 23	20,050 01	14,999 80
“	1893			20,348 34	14,107 11
“	1894		6,547 72	20,574 53	13,903 46
“	1895		27,982 93	20,428 59	12,299 49
“	1896			20,725 47	15,050 85
“	1897		9,813 15	21,012 64	14,862 98
“	1898	25,000 00	5,799 34	20,650 00	16,164 92
“	1899		1,000 00	20,613 32	13,463 01
“	1900		4,959 22	20,147 59	14,505 30
“	1901		483 40	20,118 42	14,199 12
“	1902			16,682 52	6,532 33
“	1903			8,218 14	10,063 38
“	1904			9,236 27	11,936 37
“	1905		14,949 83	9,086 68	10,499 99
“	1906		2,531 24	9,291 91	18,640 71
“	1907		598 64	7,552 02	11,711 09
“	1908		2,260 81	7,032 31	13,019 76
“	1909		21,758 84		†
“	1910		24,319 49		†
Total		*1,636,690 26	265,810 84	649,574 89	525,691 23

* See page 53 for total of St. Lawrence River and Canals.

† No expenditure has been incurred since 1910.

W. C. LITTLE,

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

CARILLON AND GRENVILLE CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Imperial Government.....		*			
Government expenditure prior to Confederation		63,053 64			
" 1868 to 1879 included	1880	1,721,338 16	50,155 93	112,345 38	126,775 54
" since.	1881	281,514 27		11,959 14	7,625 54
"	1882	336,707 53		13,059 18	8,076 91
"	1883	433,084 39		14,387 49	7,582 68
"	1884	433,575 10		17,479 58	8,310 02
"	1885	399,267 16		17,393 91	7,918 42
"	1886	157,187 72		19,702 30	10,429 26
"	1887	104,973 24	75 00	20,597 82	9,303 31
"	1888	20,747 11		20,011 36	19,554 41
"	1889	38,996 29		21,531 12	10,036 62
"	1890	298 17		22,098 88	10,135 66
"	1891	17 58	4,526 61	15,896 16	7,582 38
"	1892		4,395 25	21,230 22	10,796 68
"	1893	34,585 64	15,036 48	17,458 69	8,620 15
"	1894	207 00	42,298 74	16,762 71	10,669 28
"	1895	385 55	20,034 94	14,144 98	11,620 09
"	1896		5,963 76	15,453 21	12,303 25
"	1897	3,850 31		13,995 69	12,161 10
"	1898	1,908 44	4,939 20	13,780 29	11,607 95
"	1899	82,663 37	5,082 03	11,697 81	10,993 61
"	1900	39,999 37		11,919 27	11,478 88
"	1901	22,802 27	4,476 50	13,657 06	14,666 71
"	1902	4,930 65	9,331 95	13,342 22	13,416 00
"	1903		16,998 69	13,725 99	19,366 30
"	1904		15,992 52	14,348 17	17,766 28
"	1905		9,150 07	16,224 94	17,262 29
"	1906		8,715 46	15,858 19	19,977 19
"	1907		24,179 33	18,232 71	10,924 72
"	1908		9,393 38	16,749 03	7,036 40
"	1909		1,387 35	23,019 45	9,775 35
"	1910		68,597 35	23,085 54	10,758 01
"	1911		10,410 09	23,512 72	11,925 28
"	1912		9,051 98	23,608 04	11,303 46
"	1913			25,494 59	11,531 20
"	1914		774 60	25,730 35	16,299 00
"			10,464 53	26,452 76	12,199 42
Total.....		†4,182,092 96	351,431 74	735,948 95	528,788 63

*Expenditure not given—records relating to same were kept in Ordnance Office at Montreal and were destroyed by fire in 1852.

† Included in total cost of Ottawa River Works, *see* page 48. Cost of enlargement, \$4,119,039.32.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

CHAMBLY CANAL.

	Year ending:	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation	.....	634,711 76			
" " 1868 to 1879 included.	.....	2,495 00	8,315 25	122,386 28	170,152 70
" " " since	1880			11,516 22	12,377 74
" " " "	1881			13,950 47	20,705 17
" " " "	1882		31,796 41	16,686 78	16,843 60
" " " "	1883		21,332 36	15,904 38	15,182 24
" " " "	1884		41,640 77	18,448 85	12,003 34
" " " "	1885		21,049 23	18,378 55	13,046 95
" " " "	1886		14,547 27	19,501 28	11,999 77
" " " "	1887		17,911 17	19,053 62	20,071 37
" " " "	1888		65,536 64	20,073 60	11,823 74
" " " "	1889		51,437 87	19,679 22	19,392 18
" " " "	1890		23,221 48	19,655 38	14,399 93
" " " "	1891		43,344 41	19,204 76	11,399 93
" " " "	1892		38,353 99	19,665 22	12,976 48
" " " "	1893		21,127 65	19,310 29	12,451 03
" " " "	1894		8,567 78	19,040 93	11,779 12
" " " "	1895		6,147 63	19,325 49	11,920 74
" " " "	1896		3,694 63	19,349 65	11,801 12
" " " "	1897		12,665 88	18,754 17	13,128 55
" " " "	1898	*150.00	13,184 68	17,992 90	12,466 51
" " " "	1899		15,255 42	18,336 50	11,997 51
" " " "	1900		5,448 88	18,397 58	13,995 00
" " " "	1901		1,195 09	18,529 48	17,572 35
" " " "	1902		19,132 80	18,832 25	17,313 02
" " " "	1903		8,977 43	19,286 10	21,745 65
" " " "	1904		26,701 59	21,544 69	25,656 00
" " " "	1905		33,066 50	26,970 79	19,896 57
" " " "	1906		26,192 72	26,039 53	25,173 48
" " " "	1907		29,953 80	19,916 33	22,508 88
" " " "	1908	157 90	34,264 31	28,375 21	30,627 72
" " " "	1909	13,307 02	35,784 54	28,440 40	24,389 29
" " " "	1910	30,479 41	8,207 00	29,198 76	22,825 53
" " " "	1911	20,000 04	8,717 20	30,548 74	23,950 19
" " " "	1912	15,469 29	26,838 40	34,796 66	29,508 01
" " " "	1913	12,529 07	3,486 97	34,323 21	44,748 39
" " " "	1914	2,697 03	10,314 09	35,155 28	39,712 20
Total	.....	†731,696 52	737,411 84	876,569 65	827,542 00

* Less proceeds of sale of piece of land in 1898.

† Chamby Canal and Richelieu River—

Chamby Canal, as above..... \$ 731,696 52

St. Ours Lock, *see* page 54..... 127,223 56

\$ 858,920 08

Less amounts deducted at Confederation, *see* Public Accounts, 1868, part I, page 9—

Government expenditure prior to Confederation—

Chamby Canal as above..... \$ 634,711 76

St. Ours Lock, *see* page 54..... 121,537 65

\$ 756,249 41

Returned as an asset in Public Accounts, 1868. \$ 433,807 83

322,441 58

Agreeing with Public Accounts, 1914, page 4..... \$ 536,483 50

W. O. LITTLE,
Accountant.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

CORNWALL CANAL.

	Year ending.	Chargeable to Capital.		Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation.....		1,933,152 69				
Government expenditure 1868 to 1875 included.....		12,472 04		31,585 51	94,202 59	59,009 74
Cost of original construction...			1,945,624 73			
Expenditure 1868 to 1879 in- cluded.						
Expenditure since		337,318 87			54,339 77	22,782 57
"	1880	109,454 95			14,440 33	9,735 76
"	1881	53,948 14			15,173 60	5,524 10
"	1882	44,587 61			15,052 20	6,634 62
"	1883	21,728 93			18,283 67	8,361 71
"	1884	22,018 13			18,475 48	9,007 73
"	1885	62,034 90		16,298 96	15,988 96	12,368 51
"	1886	57,820 83		6,960 95	15,994 80	11,832 83
"	1887	46,966 43			17,520 54	12,100 29
"	1888	67,945 74			16,938 54	13,942 64
"	1889	163,993 85			17,890 55	58,205 26
"	1890	365,038 01		2,000 00	17,063 49	12,758 18
"	1891	599,001 85		1,459 98	16,077 72	9,830 05
"	1892	398,555 25		2,345 26	15,596 66	9,864 36
"	1893	352,536 13			15,173 01	9,668 14
"	1894	404,990 22			15,344 02	7,733 54
"	1895	450,689 65		21,497 74	15,414 56	13,053 55
"	1896	448,408 31		2,175 00	15,472 26	25,259 56
"	1897	438,487 51			15,540 43	16,438 32
"	1898	133,208 96			15,011 50	15,431 02
"	1899	37,649 00		15,960 80	16,000 00	14,623 90
"	1900	169,889 51		18,547 50	18,798 10	13,998 29
"	1901	62,032 47			17,104 13	13,166 89
"	1902	90,535 18			17,896 58	15,045 95
"	1903	77,833 81			70,129 29	19,205 66
"	1904	113,795 16		1,730 16	45,792 64	20,932 55
"	1905	104,093 45		8,324 83	71,073 68	28,100 67
"	1906	37,879 09		20,063 79	71,246 77	31,893 13
"	1907	5,218 03		4,191 61	52,050 56	24,489 18
"	1908	9,897 90		11,270 83	73,651 90	35,703 68
"	1909	495 00		151,628 65	75,581 54	42,978 72
"	1910	89 54		35,549 06	76,519 49	51,330 83
"	1911			76,719 09	78,583 80	45,362 81
"	1912	8,037 07		60,352 90	83,784 79	59,338 24
"	1913			29,753 37	79,897 25	56,423 40
"	1914			45,537 81	83,018 63	53,039 73
Cost of enlargement			5,297,179 48			
Total			* 7,242,804 21	563,953 80	1,386,123 83	875,181 11

* Included in total cost of St. Lawrence River and Canals, See page 53.

W. C. LITTLE,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, etc.—Continued.

LACHINE CANAL

[illegible]

Total expenditure on capital account as above.....	\$ 13,763,414 89
Less charged to St. Lawrence River and Canals, <i>see</i> page 53.....	\$ 2,950,104 15
Less expenditure by Imperial Government	40,000 00

Less expenditure by Imperial Government	40,000 00	
	<hr/>	2,990,104 15

Agreeing with Public Accounts balance sheet 1914, page 4.....	\$ 10,773,310 74
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W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

LAKE ST. FRANCIS.

	Year ending.	Capital.	Renewals Chargeable to Income.
		\$ cts.	\$ cts.
Government expenditure since Confederation.....	1898	3,420 00	
" " ".....	1899	23,110 00	2,495 47
" " ".....	1900	15,431 46	12,288 39
" " ".....	1901	15,000 00	8,060 30
" " ".....	1902	13,945 25	
" " ".....	1903	5,000 00	
" " ".....	1904		2,199 52
" " ".....	1905	†	
Total.....		*75,906 71	25,043 68

* Included in total cost of St. Lawrence river and canals, *see* page 53.

† Transferred to Department of Marine and Fisheries in 1905.

W. C. LITTLE,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

LAKE ST. LOUIS.

	Year ending.	Chargeable to Capital.	Chargeable to Revenue.
		\$ cts.	\$ cts.
Government expenditure since Confederation.....	1895	4,753 14	
" " ".....	1896	49,909 31	
" " ".....	1897	73,300 41	
" " ".....	1898	64,495 83	
" " ".....	1899	57,607 79	
" " ".....	1900	11,765 70	
" " ".....	1901	12,918 31	
" " ".....	1902	6,000 00	
" " ".....	1903	9,508 72	
" " ".....	1904	7,916 90	
" " ".....	1905	†	
Total.....		*298,176 11	

* Included in total cost of St. Lawrence River and Canals, *see* page 53.

† Transferred to Department of Marine and Fisheries in 1905.

W. C. LITTLE,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

MURRAY CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation	1868		400 00		
" " since " "	1882	7,135 63			
" " " "	1883	84,071 68			
" " " "	1884	118,187 43			
" " " "	1885	148,902 66			
" " " "	1886	179,704 52			
" " " "	1887	142,563 66			
" " " "	1888	146,754 37			
" " " "	1889	215 326 46			
" " " "	1890	106,760 35		494 31	
" " " "	1891	61,260 49		5,137 03	173 53
" " " "	1892	5,964 22		5,803 48	3,505 15
" " " "	1893	30,838 79		5,499 62	5,341 34
" " " "	1894			5,667 52	5,295 57
" " " "	1895			5,354 97	5,063 49
" " " "	1896			5,409 10	5,410 33
" " " "	1897			5,526 87	3,966 41
" " " "	1898			5,799 94	4,710 23
" " " "	1899			5,073 70	3,533 68
" " " "	1900			5,613 83	2,777 60
" " " "	1901			5,175 74	1,138 15
" " " "	1902			5,254 51	6,377 19
" " " "	1903	500 00		5,757 00	4,627 70
" " " "	1904	750 00	2,521 13	5,291 43	6,075 94
" " " "	1905	100 00	740 45	5,346 62	4,452 68
" " " "	1906		293 75	5,183 61	2,840 91
" " " "	1907		10,423 00	2,788 14	1,710 55
" " " "	1908		37,334 70	4,244 42	2,953 23
" " " "	1909	126 45	20,250 61	4,720 09	3,374 82
" " " "	1910			4,378 74	2,674 57
" " " "	1911			3,942 94	2,075 26
" " " "	1912		14,390 45	4,213 21	3,344 46
" " " "	1913		11,254 14	5,512 70	2,955 94
" " " "	1914		3,814 88	5,669 45	4,220 02
Total	....	*1,248,946 71	101,423 11	122,858 97	88,598 75

* Agreeing with Public Accounts Balance Sheet, 1914, page 4.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

OTTAWA RIVER WORKS.

	\$	cts.	\$	cts.
Ste. Anne's Lock, page 52.....			1,170,215	63
Carillon and Grenville Canal, page 41.....			4,182,092	96
Culbute Canal, page 44.....			382,391	46
Rideau Canal, page 49.....	4,167,454	21		
Less expenditure by Imperial Government.....	3,911,701	47	255,752	74
Total Ottawa River Works (Capital).....			5,990,452	79
Add expenditure on slide and booms prior to Confederation.....	719,247	13		
Add expenditure on slides and booms since Confederation.....	7,243	60		
Add expenditure on Chats Falls Canals prior to Confederation.....	482,950	81		
Add expenditure in 1881, charged to Miscellaneous. See page 229, part ii, Public Accounts		1,136	84	
Add amount transferred. See page xxxvi, Public Accounts, Balance Sheet, 1881.....	233,555	85		
			1,444,134	23
			7,434,587	02
Less expenditure prior to Confederation, transferred to Income Account.....	320,618	28		
Less expenditure in 1872, on Carillon and Grenville Canal, as shown in Public Accounts Balance Sheet, page xx, under Miscellaneous.	165,257	28		
			485,875	56
Agreeing, less outstanding cheques, with Balance Sheet, Public Ac- counts, 1914, page 4.....			6,948,711	46

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

RIDEAU CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Imperial Government.....		3,911,701 47			
Government expenditure prior to Confed'n.		153,062 60			
" " 1868 to 1879 included .		19,559 30	47,875 89	283,919 10	196,738 05
" " " since	1880			26,463 88	11,434 05
" " " " " " " " " " " "	1881		133 50	26,024 71	8,627 00
" " " " " " " " " " " "	1882			26,915 29	13,860 28
" " " " " " " " " " " "	1883		70 65	27 322 81	23,524 84
" " " " " " " " " " " "	1884		4,597 50	26,938 95	19,245 02
" " " " " " " " " " " "	1885		2,098 76	26,971 32	18,189 55
" " " " " " " " " " " "	1886		550 00	27,045 95	35,648 04
" " " " " " " " " " " "	1887		20,823 96	29,440 46	18,565 34
" " " " " " " " " " " "	1888		18,889 48	33,458 83	25,478 87
" " " " " " " " " " " "	1889		6,665 22	33,801 77	18,106 36
" " " " " " " " " " " "	1890		21,124 10	34,270 57	18,025 21
" " " " " " " " " " " "	1891		20,967 25	34,641 98	21,537 56
" " " " " " " " " " " "	1892		31,363 23	35,500 82	21,507 16
" " " " " " " " " " " "	1893		24,274 71	35,022 49	18,789 50
" " " " " " " " " " " "	1894		14,485 11	34,943 35	16,939 47
" " " " " " " " " " " "	1895		31,559 48	33,827 08	19,837 32
" " " " " " " " " " " "	1896		21,452 29	34,052 77	30,196 38
" " " " " " " " " " " "	1897		19,079 11	31,461 55	29,535 94
" " " " " " " " " " " "	1898		13,608 39	30,759 05	26,599 98
" " " " " " " " " " " "	1899		700 29	30,751 20	28,199 49
" " " " " " " " " " " "	1900		11,780 41	30,623 27	30,237 09
" " " " " " " " " " " "	1901			31,334 40	33,791 17
" " " " " " " " " " " "	1902		8,894 40	32,193 66	33,959 86
" " " " " " " " " " " "	1903		16,235 13	34,595 31	36,424 23
" " " " " " " " " " " "	1904		13,525 04	39,127 96	38,496 78
" " " " " " " " " " " "	1905	1,565 84	14,513 35	40,838 81	49,790 55
" " " " " " " " " " " "	1906		5,272 90	41,819 77	54,495 63
" " " " " " " " " " " "	1907		14,322 03	30,667 34	44,627 82
" " " " " " " " " " " "	1908		42,903 03	44,875 16	55,090 45
" " " " " " " " " " " "	1909		19,989 52	44,911 60	53,880 51
" " " " " " " " " " " "	1910		9,225 73	48,324 13	95,188 97
" " " " " " " " " " " "	1911		6,188 71	47,165 63	79,352 59
" " " " " " " " " " " "	1912		4,358 40	54,156 89	85,912 96
" " " " " " " " " " " "	1913	41,565 00	21,992 94	56,863 98	91,984 66
" " " " " " " " " " " "	1914	40,000 00	27,094 80	60,471 38	102,092 68
Total.....		*4,167,454 21	516,615 31	1,541,503 22	1,505,971 31

* Included in total cost of Ottawa River Works. See page 48.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

SAUT STE. MARIE CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure, 1868 to 1887, included					
Government expenditure since	1888	8,145 06	949 35		
" " " "	1889	34,018 95			
" " " "	1890	176,568 55			
" " " "	1891	325,336 33			
" " " "	1892	341,474 31			
" " " "	1893	589,801 25			
" " " "	1894	1,316,529 29			
" " " "	1895	466,151 50		3,432 73	
" " " "	1896	189,986 59		16,074 70	2,650 17
" " " "	1897	209,561 82		15,381 59	7,671 79
" " " "	1898	21,004 56		14,389 92	8,172 09
" " " "	1899	63,935 48		13,840 24	6,564 40
" " " "	1900	27,157 98		13,901 40	13,219 87
" " " "	1901	323,353 93	48 39	13,730 93	10,289 18
" " " "	1902	122,505 73		15,920 80	14,839 71
" " " "	1903	65,933 43		16,077 22	10,855 70
" " " "	1904	32,029 54		14,653 35	9,491 44
" " " "	1905	110,181 69		15,681 55	14,776 33
" " " "	1906	120,000 00		15,878 11	20,086 15
" " " "	1907	95,504 63		12,290 94	11,520 53
" " " "	1908	140,433 22		20,345 38	23,206 00
" " " "	1909	42,109 63	11,453 28	15,231 79	16,462 29
" " " "	1910	46,809 13	147,147 52	18,976 64	20,300 77
" " " "	1911	54,797 37	77,066 45	24,951 49	19,357 74
" " " "	1912	18,227 10	29,706 21	27,054 50	28,798 51
" " " "	1913	45,941 17	13,726 84	27,588 62	26,762 40
" " " "	1914	6,874 27		28,537 49	26,426 47
Total		*4,994,372 51	280,098 04	343,939 39	292,049 54

*Agreeing with Public Accounts, 1914, page 4.

W. C. LITTLE,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

SOULANGES CANAL.

	Year ending	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation	1892	54,235 76			
" " since.	1893	210,336 24			
" " "	1894	723,380 95			
" " "	1895	752,016 53			
" " "	1896	535,939 07			
" " "	1897	363,126 06			
" " "	1898	1,016,401 00			
" " "	1899	1,442,824 22			
" " "	1900	693,806 24		6,711 84	5,000 00
" " "	1901	462,626 36	115 00	25,154 78	5,888 77
" " "	1902	235,021 79		22,672 50	2,267 13
" " "	1903	248,929 10		31,987 06	10,362 23
" " "	1904	113,328 45	15,608 69	25,235 25	39,382 01
" " "	1905	31,202 71	30,406 25	25,432 49	21,174 84
" " "	1906	5,000 22	16,033 79	24,817 37	17,096 33
" " "	1907	13,508 88	3,216 29	19,964 04	15,604 71
" " "	1908	50,634 01	4,245 18	28,988 36	35,687 11
" " "	1909	17,795 79	12,363 78	32,324 20	34,802 37
" " "	1910	153,022 23	2,299 93	32,851 69	46,287 16
" " "	1911	102,699 69	3,999 58	32,283 03	37,532 93
" " "	1912	286,787 88	14,375 47	36,871 50	38,554 54
" " "	1913	180,816 28		38,080 18	27,221 50
" " "	1914	81,235 56	16,117 84	38,904 16	25,383 32
Total.....		*7,777,675 02	118,781 80	422,278 45	362,244 95

* Included in total cost of St. Lawrence River and Canals, *see* page 53.W. C. LITTLE,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

STE. ANNE'S LOCK AND CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation		134,456 51			
Gov. expenditure since 1868 to 1879 included.		137,051 78	2,479 57	20,238 18	29,091 00
" " 1880	1880	3,054 68		2,152 57	1,704 71
" " 1881	1881	69,042 76		2,553 02	3,257 92
" " 1882	1882	193,158 36		2,611 30	2,343 99
" " 1883	1883	172,950 95		2,569 86	3,448 83
" " 1884	1884	142,006 25		2,775 32	2,725 49
" " 1885	1885	93,679 57		2,618 60	4,042 04
" " 1886	1886	129,681 67		2,611 90	5,803 01
" " 1887	1887	45,276 08	6,054 10	2,537 41	1,499 96
" " 1888	1888	18,910 55	1,372 59	2,505 61	1,380 75
" " 1889	1889	24,786 33		2,569 22	1,730 79
" " 1890	1890	6,151 14		2,571 04	1,525 51
" " 1891	1891		8,173 69	2,505 69	1,503 56
" " 1892	1892		25,471 61	2,571 28	1,666 21
" " 1893	1893		6,521 88	2,581 08	2,800 03
" " 1894	1894		3,497 56	2,640 00	2,799 63
" " 1895	1895		3,694 33	2,508 14	3,025 91
" " 1896	1896			2,495 54	4,993 89
" " 1897	1897			2,357 51	1,688 12
" " 1898	1898			1,904 10	1,699 44
" " 1899	1899			1,920 12	1,997 96
" " 1900	1900			1,840 51	2,679 21
" " 1901	1901			1,895 89	3,999 02
" " 1902	1902			1,994 52	3,015 97
" " 1903	1903		1,984 39	2,072 17	4,684 42
" " 1904	1904			2,292 94	2,244 13
" " 1905	1905			2,151 01	6,091 44
" " 1906	1906			2,259 16	2,294 86
" " 1907	1907		2,449 96	1,595 62	901 47
" " 1908	1908		2,501 42	2,248 29	1,693 63
" " 1909	1909		199 67	2,292 19	4,290 57
" " 1910	1910		2,539 76	2,267 60	2,446 28
" " 1911	1911		2,880 93	2,315 34	2,628 91
" " 1912	1912			2,770 51	2,738 40
" " 1913	1913			2,769 63	2,298 26
" " 1914	1914		7,379 94	2,896 86	6,799 35
Total		*1,170,215 63	77,001 40	103,459 73	129,534 67

* Included in total cost of Ottawa River Works, see page 48.

Original Construction.....\$ 134,456 51

Enlargement, including New Lock.....1,035,759 12

\$ 1,170,215 63W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

ST. LAWRENCE RIVER AND CANALS, SURVEYS, Etc.

	Year ending.	CHARGEABLE TO CAPITAL.				Chargeable to Income.
		North Channel.	River Reaches.	Galops Channel.	Total.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation.....					18,442 85	98,373 46
Government expenditure 1873 to 1881 included					208,965 88	
Government expenditure since 1882	1882		6,933 45	22,000 00	28,933 45	
" "	1883		3,574 31	41,300 00	44,874 31	
" "	1884		15,546 03	74,300 00	89,846 03	
" "	1885		13,710 17	101,400 00	115,110 17	
" "	1886		16,251 73	99,800 00	116,051 73	
" "	1887		20,037 31	54,400 00	74,437 31	
" "	1888		16,082 85	40,400 00	56,482 85	
" "	1889		1,293 92	17,200 00	18,493 92	
" "	1890		18,279 91	5,700 00	23,979 91	
" "	1891		35,137 25		35,137 25	
" "	1892		59,779 31		59,779 31	
" "	1893		52,643 39		52,643 39	
" "	1894		13,721 66		13,721 66	
" "	1895		1,223 72	181,552 03	182,775 75	
" "	1896		7,457 05		7,457 05	
" "	1897		12,347 31		12,347 31	
" "	1898	171,336 65	7,491 11	32,710 00	211,537 76	
" "	1899	461,979 50	9,366 47	42,430 00	513,775 97	
" "	1900	225,000 00	72,484 41	50,000 00	347,484 41	
" "	1901	184,790 34	19,389 75	91,211 97	295,392 06	
" "	1902	125,000 00	29,268 64	24,037 85	178,306 49	
" "	1903	126,833 94	16,432 28	25,000 00	168,266 22	
" "	1904	68,595 42	9,634 66	6,450 00	84,680 08	
" "	1905	93,025 89	25,743 51	49,734 70	168,504 10	
" "	1906	83,028 98		26,566 26	109,595 24	
" "	1907	61,528 84		13,350 00	74,878 34	
" "	1908	40,500 00		12,976 77	53,476 77	
" "	1909	42,770 45		25,378 21	68,148 66	
" "	1910	34,389 32		2,057 86	36,447 18	13,694 97
" "	1911					16,224 68
" "	1912					
" "	1913					
" "	1914					
Total		1,718,778 83	483,830 20	1,039,595 65	3,469,913 41*	128,298 11

*In this total is included an expenditure on capital account of \$227,408.73 on the St. Lawrence River and Canals for the period previous to 1882.

ST. LAWRENCE RIVER AND CANALS, SURVEYS, Etc.

St. Lawrence River and Canals, as above.	\$ 3,469,913 41
Beauharnois Canal, <i>see</i> page 40.	1,636,690 26
Cornwall Canal " 43	7,242,804 21
Williamsburg Canal " 60 and 61	10,491,098 07
Lake St. Louis " 46	208,176 11
Soulanges Canal " 51	7,777,675 02
Lachine Canal, prior to Confederation to June 30, 1875, <i>see</i> page 45.	2,950,104 15
Lake St. Francis, <i>see</i> page 46	75,906 71

Agreeing with Public Accounts balance, 1914, page 4. \$33,942,367 94

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

ST. OURS LOCK.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Govt. expenditure prior to Confederation		121,537 65			
" 1868 to 1879 included.	1880			19,459 64	13,901 87
" since	1881			1,614 01	705 54
"	1882			1,741 97	1,299 77
"	1883			2,002 71	1,902 41
"	1884		17,230 32	2,361 65	2,188 08
"	1885		5,279 87	2,315 37	1,494 99
"	1886		4,700 64	2,271 57	3,652 63
"	1887			2,311 70	4,143 47
"	1888			2,175 37	5,864 78
"	1889			2,216 04	2,801 17
"	1890		17,964 45	2,421 14	2,002 63
"	1891		21,571 96	2,138 40	1,935 44
"	1892		21,696 74	2,011 08	4,460 16
"	1893		3,585 34	2,168 44	1,944 33
"	1894			2,136 66	1,994 34
"	1895			2,216 68	924 55
"	1896			2,161 63	915 50
"	1897			2,094 91	1,678 49
"	1898			2,135 60	707 06
"	1899			2,049 67	692 04
"	1900			2,244 12	1,494 93
"	1901		1,596 88	2,181 43	2,681 10
"	1902		3,610 06	2,128 25	1,681 44
"	1903		15,549 27	2,262 39	984 36
"	1904		9,344 89	2,288 63	1,671 83
"	1905		7,984 41	2,334 67	1,690 61
"	1906		14,900 90	2,479 66	1,716 35
"	1907		7,307 39	2,582 95	3,872 75
"	1908		4,200 00	2,064 62	1,142 79
"	1909		3,338 79	2,891 76	2,121 43
"	1910			2,994 78	3,693 19
"	1911		1,925 08	4,137 64	1,752 66
"	1912	4,306 28	1,200 23	3,527 69	2,353 81
"	1913		3,998 58	3,584 10	2,259 46
"	1914	1,384 63	2,678 37	3,530 02	2,449 44
"			1,364 71	4,599 36	2,015 86
Total		*127,228 56	174,028 88	105,839 31	88,799 26

* Included in the total cost of Chambly Canal and Richelieu River, *see* page 42.W. C. LITTLE,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

ST. PETER'S CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Govt. expenditure prior to Confederation		156,523 32			
" " 1868 to 1879 included.		300,564 93	46,193 57	4,607 66	15,682 80
" " since	1880	80,120 54		400 00	
" "	1881	69,434 76		959 58	
" "	1882	484 00		1,920 54	200 63
" "	1883			2,089 19	232 42
" "	1884	2,471 40		2,601 47	367 85
" "	1885	16,820 15		1,929 11	183 11
" "	1886	2,316 85		2,360 67	297 81
" "	1887	1,087 75	750 00	2,777 13	343 23
" "	1888			3,217 77	1,588 40
" "	1889		500 00	3,085 29	353 38
" "	1890			3,110 15	255 34
" "	1891	972 65	510 53	3,255 30	312 02
" "	1892	14,387 00	30,936 82	3,007 70	1,461 24
" "	1893	811 59	9,987 78	2,938 15	1,856 30
" "	1894	437 05	3,852 21	2,935 94	1,986 70
" "	1895	868 44	26,222 46	2,490 81	353 55
" "	1896	1,455 21	16,743 64	2,182 04	260 90
" "	1897			2,728 38	1 20
" "	1898		111 70	2,785 25	453 85
" "	1899			2,819 86	456 61
" "	1900			2,833 24	1,483 30
" "	1901		2,311 26	2,730 44	841 63
" "	1902		10,014 43	2,939 81	274 44
" "	1903			2,836 49	764 11
" "	1904			3,126 94	122 45
" "	1905		3,000 10	2,969 90	1,095 90
" "	1906			3,239 19	253 65
" "	1907			2,468 78	246 87
" "	1908			3,371 13	942 64
" "	1909			3,282 22	532 78
" "	1910			3,449 43	238 14
" "	1911			4,180 96	473 44
" "	1912		5,208 18	4,768 20	361 49
" "	1913		39,143 77	5,144 13	807 78
" "	1914		48,455 79	5,251 36	618 88
		648,735 64			
Less—Refunds in 1897-8.		208 50			
Total		*648,547 14	243,942 24	106,803 21	35,704 84

* Expenditure as above. \$ 648,547 14

Less expenditure prior to Confederation. 156,523 32

Agreeing with Public Accounts, 1914, page 4. \$ 492,023 82

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS.

OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

TAY CANAL.

	Year ending	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure since Confederation	1882	.....	748 65		
" " "	1883	4,831 80	.....	
" " "	1884	50,878 12	.....	
" " "	1885	92,473 97	.....	
" " "	1886	65,561 51	.....	
" " "	1887	49,617 92	.....	
" " "	1888	54,166 57	.....	
" " "	1889	89,486 18	.....	
" " "	1890	22,226 23	.....	*	*
" " "	1891	17,114 78	.....	*	*
" " "	1892	29,771 65	.....	*	*
" " "	1893	.....	.....	*	*
" " "	1894	.....	.....	*	*
" " "	1895	.....	.....	*	*
" " "	1896	.....	.....	*	*
" " "	1897	10,720 50	.....	*	*
" " "	1898	.....	.....	*	*
" " "	1899	.....	.....	*	*
" " "	1900	2,750 00	.....	*	*
Total...		489,599 23	748, 65	*	*

* Included in Rideau Canal since 1890. No expenditure since 1900.

† Agreeing with Public Accounts, 1914, page 4.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

TRENT CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation		309,371 31			
" since	1880	561 50		1,188 92	3,568 89
" " " "	1881			2,489 93	2,233 50
" " " "	1882		5,836 51	2,011 92	8,115 50
" " " "	1883	40,767 16	9,303 66	2,235 50	3,047 42
" " " "	1884	120,393 91	6,198 57	2,208 64	5,264 35
" " " "	1885	121,382 84		3,303 87	4,653 50
" " " "	1886	75,103 30		1,639 75	5,917 88
" " " "	1887	179,541 63		1,938 08	6,008 88
" " " "	1888	114,879 35		1,770 29	5,151 42
" " " "	1889	47,592 13	29,677 92	3,242 05	5,935 94
" " " "	1890	58,644 50	11,522 65	3,450 99	730 55
" " " "	1891	9,826 49	3,164 81	3,803 66	4,888 98
" " " "	1892	4,457 28	6,566 97	3,695 85	4,721 85
" " " "	1893	5,962 47	10,838 90	3,739 86	2,087 17
" " " "	1894	3,412 32	20,403 93	3,785 47	4,988 59
" " " "	1895	53,907 70	21,143 41	4,184 18	3,374 49
" " " "	1896	292,976 08	6,185 75	4,349 34	3,329 97
" " " "	1897	486,575 70	13,880 37	4,965 39	3,497 30
" " " "	1898	351,273 31	8,991 54	5,034 60	4,998 80
" " " "	1899	166,611 49	6,179 79	5,048 72	6,454 49
" " " "	1900	334,583 01	8,043 39	5,131 52	9,989 26
" " " "	1901	284,503 89	10,494 82	5,254 51	13,075 89
" " " "	1902	449,075 45	26,165 93	5,575 52	14,984 88
" " " "	1903	523,950 74	18,548 58	6,993 25	10,791 15
" " " "	1904	489,038 44	21,228 55	7,237 05	21,179 12
" " " "	1905	333,261 75	36,853 28	12,071 88	26,056 78
" " " "	1906	319,789 49	26,030 36	17,440 68	33,398 85
" " " "	1907	153,045 42	35,360 10	19,229 25	36,516 47
" " " "	1908	343,176 05	96,315 87	32,826 38	33,382 94
" " " "	1909	1,099,836 38	80,517 65	32,028 57	44,849 83
" " " "	1910	1,000,000 00	59,483 51	36,800 42	54,206 13
" " " "	1911	1,682,449 32	78,914 08	38,019 33	40,178 54
" " " "	1912	1,746,095 48	97,254 20	44,811 08	50,175 72
" " " "	1913	1,162,605 75	41,499 98	47,431 26	50,049 83
" " " "	1914	1,146,383 31	38,259 19	48,777 82	54,184 46
Total	*	13,611,034 95	834,804 27	423,715 53	581,989 92

* Total expenditure on Capital Account as above..... \$13,611,034 95

Less—Expenditure prior to Confederation..... \$ 309,371 31

" Year 1880..... 561 50

309,932 81

Agreeing with Public Accounts Balance Sheet, 1914, page 4..... \$13,301,102 14

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued.*

WELLAND CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Imperial Government.....		222,220 00			
Government expenditure prior to Confederation.....		7,416,019 83			
" " 1865 to 1879 included.....		9,445,618 44	125,341 53	583,160 88	771,359 96
" " since.....	1880	1,252,924 75		63,198 10	76,535 25
" " ".....	1881	1,242,943 37	6,593 19	56,398 04	69,249 53
" " ".....	1882	603,402 17	13,664 80	74,641 51	84,374 97
" " ".....	1883	549,433 29	5,979 03	109,207 21	72,707 62
" " ".....	1884	432,336 21		113,276 87	90,926 97
" " ".....	1885	463,505 38	6,150 21	112,670 00	91,534 66
" " ".....	1886	215,380 75	1,359 00	111,660 22	69,507 48
" " ".....	1887	1,071,073 87	3,828 67	109,371 69	77,440 80
" " ".....	1888	429,720 94	10,740 86	110,806 01	86,518 97
" " ".....	1889	225,910 21	43,803 80	113,587 05	77,547 77
" " ".....	1890	117,633 22	51,648 28	109,202 02	72,686 19
" " ".....	1891	36,371 03	19,767 73	107,662 63	82,548 30
" " ".....	1892	29,541 21	9,008 80	104,673 73	73,771 87
" " ".....	1893	8,259 94	25,103 13	104,926 73	65,016 84
" " ".....	1894	1,571 78	13,430 20	102,018 80	53,053 71
" " ".....	1895	3,809 35	24,245 02	90,438 07	48,270 94
" " ".....	1896	1,677 67	18,768 99	87,988 11	62,542 64
" " ".....	1897	2,282 35	22,283 06	88,095 20	41,247 81
" " ".....	1898		31,803 25	84,806 54	59,571 66
" " ".....	1899		30,099 84	86,110 88	56,270 60
" " ".....	1900	18,167 29	37,164 84	84,883 36	59,507 64
" " ".....	1901	224,536 96	87,777 43	86,889 24	72,055 89
" " ".....	1902	303,997 81	78,905 37	88,048 95	69,279 90
" " ".....	1903	315,819 49	94,127 21	90,684 05	72,004 59
" " ".....	1904	555,751 00	31,140 58	91,115 25	85,717 88
" " ".....	1905	890,457 82	34,559 42	91,928 96	111,418 62
" " ".....	1906	715,198 24	28,799 66	107,932 96	78,704 93
" " ".....	1907	480,365 03	56,036 47	75,031 24	53,247 50
" " ".....	1908	806,760 46	138,430 19	108,101 56	78,460 40
" " ".....	1909	255,986 16	129,489 99	115,934 78	88,409 53
" " ".....	1910	168,247 17	75,233 28	136,783 47	77,723 23
" " ".....	1911	236,429 80	28,688 57	128,000 33	92,739 05
" " ".....	1912	159,946 87	28,238 13	149,848 27	105,056 89
" " ".....	1913	347,711 15	39,674 82	156,598 55	93,231 29
" " ".....	1914	192,346 90	77,476 08	173,368 13	102,520 46
Total		29,443,297 91	1,432,361 43	4,290,054 49	3,422,762 34

* Total expenditure as above.....\$ 29,443,297 91
Less expenditure by Imperial Government.....222,220 00

Agreeing with Public Accounts Balance Sheet, 1914, page 4...\$ 29,221,077 91

Original cost of construction, including first enlargement.....\$ 7,693,824 03
Enlargement, including new Welland Canal.....21,749,472 98

Total expenditure as above.....\$ 29,443,297 91

W. C. LITTLE,
Accountant

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Continued*.

WELLAND SHIP CANAL.

	Year Ending.	Capital.
		\$ cts.
Government expenditure since Confederation	1914	994,257 60
Total		994,257 60

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

STATEMENT showing the amounts expended on Construction, Renewals, etc.—*Concluded*.
WILLIAMSBURG CANAL.

	Year ending.	CAPITAL.				Renewals Chargeable to Income.		Staff.		Repairs.	
		Farran's Point.	Galops.	Rapid Plat.		Total.					
		\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
Government expenditure prior to Confederation being amount of original construction.....	1868					1,320,655 54					
Government expenditure since Confederation.....	1869							5,745 97		6,442 41	
"	1870							5,769 81		5,670 88	
"	1871							5,573 13		6,546 16	
"	1872							6,382 17		6,308 41	
"	1873							5,642 94		3,240 07	
"	1874							6,424 49		7,347 75	
"	1875							6,857 19		7,395 92	
"	1876							6,547 62		4,110 29	
"	1877							7,418 39		11,690 98	
"	1878							7,388 61		10,053 61	
"	1879							7,430 11		4,449 78	
"	1880							7,617 20		3,549 71	
"	1881							7,500 15		8,999 77	
"	1882							7,572 35		5,029 73	
"	1883							7,589 44		7,447 69	
"	1884							7,425 48		7,299 39	
"	1885							7,757 04		7,349 37	
"	1886							7,696 67		8,198 03	
"	1887							7,671 54		7,847 05	
"	1888							7,635 54		7,904 76	
"	1889							7,646 79		8,190 13	
"	1890							7,482 28		8,794 61	
"	1891							8,954 53		8,191 69	
"	1892							8,678 33		7,987 40	
"	1893							9,458 33		8,331 32	
"	1894							8,676 03		8,347 97	
"	1895							10,230 09		7,029 95	
"	1896							9,675 09		7,371 37	
"	1897							9,588 51		9,038 00	
"	1898							8,697 54		8,210 71	
"								10,708 05		8,032 84	

5 GEORGE V., A. 1915

STATEMENT showing the amounts expended on Construction and Enlargement of Canals, to March 31, 1914.

Canal.	Construction.	Enlargement.	Total.
	\$ cts.	\$ cts.	\$ cts.
Beauharnois.....	1,636,690 26		1,636,690 26
*Carillon and Grenville.....	63,053 64	4,119,039 32	4,182,092 96
Chambly.....	637,056 76	94,639 76	731,696 52
Cornwall.....	1,945,624 73	5,297,179 48	7,242,804 21
Culbute.....	382,391 46		382,391 46
Lachine.....	2,589,532 85	11,173,882 04	13,763,414 89
Lake St. Francis.....		75,906 71	75,906 71
Lake St. Louis.....		298,176 11	298,176 11
Murray.....	1,248,946 71		1,248,946 71
Rideau.....	4,084,323 37	83,130 84	4,167,454 21
Sault Ste. Marie.....	4,994,372 51		4,994,372 51
Soulanges.....	7,777,675 02		7,777,675 02
Ste. Anne's, Lock and Canal.....	134,456 51	1,035,759 12	1,170,215 63
St. Lawrence River and Canals.....	18,442 85	3,451,470 56	3,469,913 41
St. Ours Lock.....	121,537 65	5,690 91	127,228 56
St. Peter's.....	648,547 14		648,547 14
Tay.....	489,599 23		489,599 23
Trent.....	13,611,034 95		13,611,034 95
Welland.....	7,693,824 03	21,749,473 88	29,443,297 91
Welland Ship Canal.....	994,257 60		994,257 60
Williamsburg. {	Farran's Point.....	877,090 57	10,491,098 07
	Galops.....	6,121,213 70	
	Rapide Plat.....	2,153,242 00	
	Williamsburg.....	1,320,655 54	
Total.....	50,392,022 81	56,554,791 26	106,946,814 07

* Construction by Imperial Government not included. Records relating to same were kept in Ordnance Office, Montreal, and were destroyed by fire in 1852.

W. C LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

RECAPITULATION.

YEARLY Expenditure on Canals and Revenue received to March 31, 1914.

	Year ending.	Capital.	Income.	REVENUE.		Revenue received.
				Staff.	Repairs.	
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Government expenditure prior to Confederation, including Imperial Government expenditure.....		20,593,866 13	98,378 46			
Government expenditure 1868 to 1879 included.....		17,004,842 55	515,196 21	1,830,398 92	1,832,998 61	5,079,068 36
Govt. expenditure since....	1880	2,123,366 34		195,039 33	147,167 52	341,598 14
"	1881	2,075,891 65	7,246 69	197,573 62	154,653 63	361,558 17
"	1882	1,593,174 09	55,025 03	224,572 61	187,399 02	325,231 54
"	1883	1,763,001 97	62,503 14	269,415 01	178,617 86	361,604 01
"	1884	1,577,295 42	60,993 09	280,657 29	192,219 38	372,561 69
"	1885	1,504,621 47	58,298 29	280,226 20	201,708 47	321,289 47
"	1886	1,333,324 80	31,984 02	282,323 63	198,251 97	328,977 43
"	1887	1,783,698 16	65,983 06	285,172 62	198,888 84	321,784 88
"	1888	1,033,118 34	120,561 59	292,458 76	201,928 93	317,902 04
"	1889	972,918 43	162,015 49	301,040 23	240,261 36	333,188 90
"	1890	1,026,364 24	146,853 54	290,516 63	176,089 00	354,816 92
"	1891	1,318,092 15	165,843 87	294,562 12	204,768 45	349,431 90
"	1892	1,437,149 30	194,129 61	293,115 58	231,089 54	324,475 24
"	1893	2,069,573 30	196,185 84	291,048 97	204,759 39	357,089 87
"	1894	3,027,164 19	110,512 07	294,446 34	179,630 13	387,788 97
"	1895	2,452,273 65	216,057 58	281,477 04	164,033 71	339,890 49
"	1896	2,258,778 97	85,820 49	292,121 05	209,321 60	339,538 72
"	1897	2,348,636 91	101,205 74	287,970 36	178,385 47	384,780 53
"	1898	3,207,249 79	82,400 55	280,872 44	203,478 86	407,652 81
"	1899	3,899,877 31	82,205 60	280,628 57	202,312 36	369,044 38
"	1900	2,639,564 93	120,653 93	292,609 24	227,626 97	322,642 86
"	1901	2,360,569 89	135,500 57	314,095 04	262,876 07	315,425 69
"	1902	2,114,689 88	213,044 91	317,838 61	263,768 27	300,413 68
"	1903	1,823,273 61	275,103 58	390,281 82	294,113 92	230,213 15
"	1904	1,880,787 20	298,678 23	381,016 82	350,278 54	79,536 51
"	1905	2,071,593 72	352,855 43	431,499 60	401,742 79	78,009 21
"	1906	1,552,121 21	310,716 70	447,962 92	375,889 60	108,067 76
"	1907	887,838 61	254,423 18	329,629 63	287,231 03	105,005 15
"	1908	1,768,156 37	483,250 11	473,638 95	411,660 53	144,882 13
"	1909	1,868,834 45	699,304 73	475,515 04	433,958 10	199,501 26
"	1910	1,650,706 64	459,835 62	515,585 16	491,793 02	193,384 28
"	1911	2,349,474 49	385,534 55	511,305 94	471,530 32	221,138 49
"	1912	2,554,938 91	384,860 73	585,899 54	555,709 95	264,114 48
"	1913	2,255,448 21	292,960 26	605,248 57	535,135 66	307,567 66
"	1914	2,824,536 79	351,397 24	642,844 68	574,038 68	380,188 06
*Total		106,946,814 07	7,637,520 63	14,040,608 88	11,625,317 55	15,329,362 83

* This does not include expenditure which has been charged to Miscellaneous Canals Expenditure but only the amount expended on specified canals.

† Canal tolls abolished this year.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, Sept. 1, 1914.

MISCELLANEOUS CANALS EXPENDITURE.

STATEMENT showing the Expenditure from Confederation to March 31, 1914.

	Year ending.	Capital.	Income.	Revenue.	Total.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure 1868 to 1879.....	1880		1,860 00	104,726 70	106,586 70
Govt. expenditure since.....	1881		2,561 55	323 16	2,884 71
" ".....	1882		2,338 41	5,535 22	7,873 63
" ".....	1883			9,826 23	9,826 23
" ".....	1884		11,781 27	6,978 54	18,759 81
" ".....	1885		7,486 62	8,305 41	15,792 03
" ".....	1886		16,725 47	1,210 61	17,936 08
" ".....	1887		20,323 62	776 30	21,099 92
" ".....	1888		23,512 00	649 04	24,161 04
" ".....	1889		34,533 07	5,799 83	40,332 90
" ".....	1890		10,091 87	5,207 64	15,299 51
" ".....	1891		16,426 69	49,550 21	65,976 90
" ".....	1892		16,925 31	56,922 05	73,847 36
" ".....	1893		6,540 49	65,074 07	71,614 56
" ".....	1894		8,498 41	63,965 54	72,463 95
" ".....	1895		2,883 11	60,265 22	63,148 33
" ".....	1896		4,132 28	60,769 56	64,901 84
" ".....	1897		10,893 40	70,340 22	81,233 62
" ".....	1898		2,937 47	62,777 12	65,714 59
" ".....	1899		1,719 69	56,284 42	58,004 11
" ".....	1900		1,318 79	66,850 29	68,169 08
" ".....	1901		11,873 35	58,836 57	70,709 92
" ".....	1902		12,267 99	61,938 61	74,206 60
" ".....	1903		3,658 23	65,770 65	69,428 88
" ".....	1904		2,491 84	63,175 19	65,667 03
" ".....	1905		3,730 79	66,067 30	69,798 09
" ".....	1906		1,498 14	64,515 07	66,013 21
" ".....	1907		9,160 44	62,171 45	71,331 89
" ".....	1908		9,687 55	66,251 27	75,938 82
" ".....	1909	14,999 70	24,760 08	105,518 99	145,278 77
" ".....	1910	5,034 00	28,819 54	106,065 87	139,919 41
" ".....	1911		29,421 06	111,755 68	141,176 74
" ".....	1912		54,734 48	103,398 27	158,132 75
" ".....	1913	5,999 20	57,151 70	110,049 21	173,200 11
" ".....	1914	3,809 24	39,026 95	121,370 46	164,206 65
" ".....		5,124 55	37,887 51	147,729 40	190,741 46
Total.....		34,966 69	529,659 17	2,076,751 37	2,641,377 23

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

STATEMENT of the Canals Revenue received during year ending March 31, 1914.

Collection Divisions.	Wharfage, Storage, Harbour Dues, etc.	Hydraulic and other Rents.	Total.
	\$ cts.	\$ cts.	\$ cts.
<i>Welland Canal</i>		588 00	588 00
Port Colborne.....	88 40	6,701 26	6,789 66
Port Colborne Elevator.....	101,422 78		101,422 78
Port Dalhousie.....	449 59	62,875 61	63,325 20
Totals.....	101,960 77	70,164 87	172,125 64
<i>St. Lawrence Canals—</i>			
Coteau Landing (Beauharnois Canal).....		14,788 15	14,788 15
“ “ (Soulanges Canal).....	75 00	3,446 00	3,521 00
Cornwall.....	1,302 03	7,633 50	8,935 53
Cardinal—Williamsburg Canals.....	28 00	2,663 00	2,691 00
Lachine Canal (Montreal).....	15,052 97	133,942 81	148,995 78
“ “ (Lachine).....	1,902 06		1,902 06
Totals.....	18,360 06	162,473 46	180,833 52
<i>Chambly Canal</i>		594 00	594 00
Chambly.....			
St. John's.....		15 00	15 00
St. Ours Lock.....			
Totals.....		609 00	609 00
<i>Ottawa River Canals—</i>			
Carillon & Grenville Canal.....		187 00	187 00
“ “ Grenville.....		5 00	5 00
“ “ Carillon.....	10 00	339 00	349 02
Ste. Anne's Lock.....	123 72	151 00	274 70
Chats Falls Canal.....		1 00	1 00
Totals.....	133 72	683 00	816 72
<i>Rideau Canal</i>		1,968 00	1,968 00
Ottawa.....	346 50	3,516 90	3,863 40
Kingston Mills.....	20 00	512 00	532 00
Smiths Falls.....	35 00	172 20	207 20
Totals.....	401 50	6,169 10	6,570 60
<i>St. Peter's Canal</i>		2 00	2 00
<i>Murray Canal</i>		235 00	235 00
<i>Trent Canal</i>	10 00	18,451 42	18,461 42
<i>Sault Ste. Marie Canal</i>	45 00	489 16	534 16
Grand totals.....	120,911 05	259,277 01	380,188 06
Net amount deposited to the credit of the Receiver General.....			380,188 06

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

STATEMENT of Hydraulic and other rents, showing rent accrued, paid and balances yet due March 31, 1914.

Balance due April 1, 1913.	Hydraulic and other rents accrued 1913-14.	Lock House rents.	Totals.	Canals.	Abatement for overcharges.	DEPOSITED TO THE CREDIT OF THE RECEIVER GENERAL.		Balance due Mar. 31, 1914.	Totals.	
						Lock House rents.	Hydraulic rents, etc.			
\$	\$	\$	\$		\$	cts.	\$	cts.	\$	cts.
72,811 13	57,207 51	588 00	130,606 64	Welland.....	3,348 58	588 00	69,576 87	57,093 19	130,606 64	
5,961 17	3,448 00	354 00	9,763 17	Williamsburg.....		354 00	2,309 00	7,100 17	9,763 17	
3,568 87	7,629 50		11,198 37	Cornwall.....			7,633 50	3,564 87	11,198 37	
7,177 84	14,858 15		22,035 99	Beauharnois.....	736 00		14,788 15	6,511 84	22,035 99	
32,169 71	138,579 70		170,953 41	Lachine.....	11,966 40	204 00	133,738 81	25,044 20	170,953 41	
886 84	119 00	594 00	1,599 84	Chambly.....		594 00	15 00	990 84	1,599 84	
6,634 11	4,333 50	1,968 00	12,935 61	Rideau.....	129 65	1,968 00	4,201 10	6,636 86	12,935 61	
983 33	16,460 79	1,290 00	18,734 12	Trent.....		1,290 00	17,161 42	282 70	18,734 12	
77 51	490 84		568 35	Sault Ste. Marie.....	19 19		489 16	60 00	568 35	
	869 50	187 00	29,171 58	Carleton and Grenville.....	171 27	187 00	344 00	28,469 31	29,171 58	
28,115 08	3,050 00	396 00	3,446 00	Soulanges.....		396 00	3,050 00		3,446 00	
	41 00	350 00	396 00	Sundry Canals.....		350 00	39 00	7 00	396 00	
5 00				Totals.....	16,371 09	5,931 00	253,346 01	135,760 98	411,409 08	
158,390 59	247,087 49	5,931 00	411,409 08							

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

RECAPITULATION—Statement of Expenditure by Canal to March 31, 1914.

Canals.	Capital.	Income.	REVENUE.		Totals.
			Staff.	Repairs.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Baie Verte.....		44,387 53			44,387 53
Beauharnois.....	1,636,690 26	265,810 84	649,574 89	525,691 23	3,077,767 22
Carillon and Grenville.....	4,182,092 96	351,431 74	735,948 95	528,788 63	5,798,262 28
Chambly.....	731,696 52	737,411 84	876,569 65	827,542 00	3,173,220 01
Cornwall.....	7,242,804 21	563,953 80	1,386,123 83	875,181 11	10,068,062 95
Culbute Lock.....	382,391 46	60,923 37	11,507 48	7,036 15	461,858 46
Lachine.....	13,763,414 89	1,397,987 56	2,448,967 19	1,817,686 93	19,428,056 57
Lake St. Francis.....	75,906 71	25,043 68			100,949 39
Lake St. Louis.....	298,176 11				298,176 11
Murray.....	1,248,946 71	101,423 11	122,858 97	88,593 75	1,561,827 54
Rideau.....	4,167,454 21	516,615 31	1,541,503 22	1,505,971 31	7,731,544 65
Sault Ste. Marie.....	7,777,675 02	118,781 80	422,278 45	362,244 95	8,680,980 22
Soulanges.....	4,994,372 51	280,098 04	343,939 39	292,049 54	5,910,459 48
Ste. Anne's Lock.....	1,170,215 63	77,001 40	103,459 73	129,534 67	1,480,211 43
St. Lawrence Riv. and Canals.....	3,469,913 41	128,298 11			3,598,211 52
St. Ours' Lock.....	127,228 56	174,028 88	105,839 31	88,799 26	495,897 01
St. Peter's.....	648,547 14	243,942 24	106,803 21	35,704 84	1,034,997 43
Tay.....	489,599 23	748 65			490,347 88
Trent.....	13,611,034 95	834,804 27	423,715 53	581,989 92	15,451,544 67
Welland.....	29,443,297 91	1,432,361 43	4,209,054 49	3,422,762 34	38,507,476 17
Welland Ship Canal.....	994,257 60				994,257 60
Williamsburg.....	1,334,551 80				
“ Farran's Point.....	877,090 57				
“ Galops.....	6,121,213 70	282,467 03	552,464 59	535,735 92	11,861,765 61
“ Rapide Plat.....	2,158,242 00				
Total.....	106,946,814 07	7,637,520 63	14,040,608 88	11,625,317 55	140,250,261 13
*Expenditure Canals General.....	34,966 69	529,659 17		2,076,751 31	2,641,377 23
Total expenditure on Canals.....	106,981,780 76	8,167,179 80	14,040,608 88	13,702,068 86	142,891,638 36

*See page 64.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

ANNAPOLIS AND DIGBY RAILWAY.

	Year.	Capital.	Income
		\$ cts.	\$ cts.
Government expenditure since Confederation.....	1889	9,847 27	
" " ".....	1890	381,942 75	
" " ".....	1891	196,869 36	
" " ".....	1892	26,129 89	
" " ".....	1893	2,190 62	
" " ".....	1894	1,675 36	
" " ".....	1895	570 55	
" " ".....	1896		
" " ".....	1897	41,457 29	
" " ".....	1898		
" " ".....	1899		
" " ".....	1900		
" " ".....	1901		8,381 82
" " ".....	1902		
" " ".....	1903		
" " ".....	1904		
" " ".....	1905		
" " ".....	1906		
" " ".....	1907		
" " ".....	1908		
" " ".....	1909		
" " ".....	1910		
" " ".....	1911		
" " ".....	1912		
" " ".....	1913		
" " ".....	1914		
Total.....		*660,683 09	8,381 82

* Of this amount Parliament voted, under 52 Vic., chap. 8, the sum of \$500,000 as a subsidy to the Western Counties Railway, N.S.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

CANADA EASTERN RAILWAY.

	Year.	Capital.
Government expenditure since Confederation.....	1905	\$ cts. 800,000 00
“ “ “.....	1906	.....
“ “ “.....	1907	.....
“ “ “.....	1908	19,000 00
“ “ “.....	1909	.....
“ “ “.....	1910	.....
“ “ “.....	1911	.....
“ “ “.....	1912	.....
“ “ “.....	1913	.....
“ “ “.....	1914	.....
Total.....		*819,000 00

* Included in total cost of Intercolonial Railway system, page 75.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

CAPE BRETON RAILWAY.

	Year.	Capital.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure since Confederation.....	1887	76,501 89	
" " ".....	1888	689,450 50	
" " ".....	1889	1,083,276 60	
" " ".....	1890	1,170,523 62	
" " ".....	1891	521,441 62	
" " ".....	1892	99,936 96	
" " ".....	1893	59,982 74	
" " ".....	1894	158,770 61	
" " ".....	1895	*	
" " ".....	1896	*	
" " ".....	1897	405 00	
" " ".....	1898	389 60	
Total.....		\$3,860,679 14	†

* Included in Intercolonial Railway capital. † Included in Intercolonial Railway working expenses.

‡ Included in total cost of Intercolonial Railway system, see page 75.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, September 1, 1914.

CARLETON BRANCH RAILWAY.

	Year.	Capital.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure since Confederation.....	1886	85,610 69	
" " ".....	1887	2,299 62	
" " ".....	1888	500 17	
" " ".....	1889		
" " ".....	1890		
" " ".....	1891		
" " ".....	1892		
" " ".....	1893		
Total.....		88,410 48	
* Less amount received from city of St. John, N.B.....		40,000 00	
Net cost.....		48,410 48	

* Victoria, chap. 6, transferred the Carleton Branch Railway to the city of St. John, N.B., for the sum of \$40,000, which sum was paid in March, 1893, to the Receiver General.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

DRUMMOND COUNTY RAILWAY.

	Year.	Construction.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure since Confederation.....	1900	1,459,000 00	.....
" " ".....	1901	.....	.....
" " ".....	1902	5,000 00	.....
" " ".....	1903	.....	.....
" " ".....	1904	.....	.....
" " ".....	1905	.....	.....
" " ".....	1906	.....	.....
" " ".....	1907	.....	.....
" " ".....	1908	.....	.....
" " ".....	1909	.....	.....
" " ".....	1910	.....	.....
" " ".....	1911	.....	.....
" " ".....	1912	.....	.....
" " ".....	1913	.....	.....
" " ".....	1914	.....	.....
Total.....		*1,464,000 00	.....

* Included in total cost of Intercolonial Railway system, page 75.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

EASTERN EXTENSION RAILWAY.

	Year.	Capital.	Working Expenses.	Revenue Received.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure since Confederation.....	1884	1,284,311 97	10,033 77	30,767 66
" " ".....	1885	2,055 92	78,273 65	73,050 01
" " ".....	1886	183 79	94,756 06	66,893 11
" " ".....	1887		94,254 04	64,107 10
" " ".....	1888		90,954 73	70,552 20
" " ".....	1889	34,235 73	90,719 04	72,436 65
" " ".....	1890		79,102 77	84,658 95
" " ".....	1891	3,255 40	*	†
Total.....		11,324,042 81	538,094 06	462,465 68

* Included in Intercolonial Railway expenses. † Included in Intercolonial Railway revenue.

‡ Included in total cost of Intercolonial Railway system, page 75.

W. C. LITTLE,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

HUDSON BAY RAILWAY.

	Year.	Capital.
		\$ cts.
Government expenditure since Confederation.....	1909	92,427 83
" " ".....	1910	53,042 63
" " ".....	1911	184,149 81
" " ".....	1912	159,632 00
" " ".....	1913	1,009,063 15
" " ".....	1914	4,498,717 25
Total.....		6,087,032 67

W. C. LITTLE,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

INTERCOLONIAL RAILWAY*.

	Year.	Construction.	Income.	Working Expenses including Windsor Branch Ry.	Revenue received, including Windsor Branch Ry.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Expenditure prior to Confederation....		10,766,725 54			
" since 1868 to 1879 included		25,847,852 40		13,382,773 41	3,670,469 65
" " " " " " " " " " " "	1880	2,048,014 60		1,607,956 70	1,520,310 45
" " " " " " " " " " " "	1881	608,732 80		1,780,353 53	1,777,856 76
" " " " " " " " " " " "	1882	585,568 79		2,080,592 37	2,100,315 85
" " " " " " " " " " " "	1883	1,616,632 96		2,383,477 20	2,395,034 99
" " " " " " " " " " " "	1884	1,405,377 52		2,366,719 95	2,376,666 19
" " " " " " " " " " " "	1885	1,195,363 08		2,460,229 87	2,392,605 00
" " " " " " " " " " " "	1886	544,958 17		2,508,473 10	2,406,858 88
" " " " " " " " " " " "	1887	823,070 86		2,854,158 91	2,621,337 41
" " " " " " " " " " " "	1888	742,203 09		3,300,481 94	2,937,337 40
" " " " " " " " " " " "	1889	655,228 13		3,174,785 19	2,923,736 46
" " " " " " " " " " " "	1890	365,246 48		3,500,455 80	2,958,243 38
" " " " " " " " " " " "	1891	79,929 34		3,691,273 65	3,007,630 51
" " " " " " " " " " " "	1892	168,101 77		3,438,891 39	2,978,950 82
" " " " " " " " " " " "	1893	228,984 79		3,062,207 45	3,069,815 20
" " " " " " " " " " " "	1894	166,362 43		2,999,317 07	3,020,485 74
" " " " " " " " " " " "	1895	327,034 51		2,964,940 98	2,979,795 59
" " " " " " " " " " " "	1896	259,105 23		3,029,304 08	2,994,201 93
" " " " " " " " " " " "	1897	145,142 00		2,936,789 71	2,906,631 25
" " " " " " " " " " " "	1898	252,367 20	70,000 00	3,275,830 14	3,154,896 49
" " " " " " " " " " " "	1899	1,081,929 94	210,000 00	3,478,559 30	3,775,558 08
" " " " " " " " " " " "	1900	1,796,348 29		4,444,296 25	4,599,423 14
" " " " " " " " " " " "	1901	3,633,836 57		5,477,285 30	5,019,497 76
" " " " " " " " " " " "	1902	4,621,841 05		5,596,939 57	5,720,990 50
" " " " " " " " " " " "	1903	2,254,266 68		6,214,496 38	6,366,884 53
" " " " " " " " " " " "	1904	1,880,856 60		7,264,263 13	6,392,865 48
" " " " " " " " " " " "	1905	3,937,621 93		8,535,689 91	6,833,561 50
" " " " " " " " " " " "	1906	3,765,170 90		7,599,400 33	7,693,282 40
" " " " " " " " " " " "	1907	1,506,209 26		6,045,597 15	6,203,751 52
" " " " " " " " " " " "	1908	4,363,494 01		9,195,347 64	9,229,989 21
" " " " " " " " " " " "	1909	3,867,232 16		9,364,256 10	8,583,100 79
" " " " " " " " " " " "	1910	1,278,409 45		8,668,620 23	9,328,888 97
" " " " " " " " " " " "	1911	762,869 06		9,613,774 77	9,911,974 83
" " " " " " " " " " " "	1912	1,710,448 56		10,624,889 89	10,666,962 44
" " " " " " " " " " " "	1913	2,391,987 53		12,009,953 31	12,052,729 39
" " " " " " " " " " " "	1914	4,329,694 68		12,893,735 98	12,940,066 52
Total		*92,014,218 36	280,000 00	192,940,117 68	185,632,707 01

* Continued page 75.

* Including \$296,872.90 paid to Nova Scotia Ry. and European and North American Ry., N.B., and charged to 'Consolidated Fund.'

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY.—*Continued.*

Total cost of construction as shown on page 74.....	†\$92,014,218 36
Less amounts transferred from Capital to Consolidated Fund as follows:—	
European and North American Railway from 1868 to 1873.....	\$ 88,363 18
Nova Scotia Railway from 1868 to 1873.....	208,509 72
	<hr/>
	296,872 90
	<hr/>
	\$91,717,345 46
To which add the following—	
Canada Eastern Railway, page 69.....	819,000 00
Cape Breton Railway, page 71.....	3,860,679 14
Drummond County Railway, page 72.....	1,464,000 00
Eastern Extension Railway, page 73.....	1,324,042 81
Montreal and European Short Line Railway, page 76.....	333,942 72
Oxford and New Glasgow, page 77.....	1,949,063 21
	<hr/>
Total capital cost of Intercolonial Railway System.....	*\$101,468,073 34

*Agreeing, less outstanding cheques, with Public Accounts, 1913-1914, page 4.

†Includes \$220.48, amount of an Exchequer Court award in 1907 against the Oxford and New Glasgow Railway.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

MONTREAL AND EUROPEAN SHORT LINE RAILWAY.

	Year.	Construction.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure since Confederation.....	1885	49,587 45	.....
“ “ “	1886	135,214 38	.....
“ “ “	1887	24,157 32	.....
“ “ “	1888	397 35	.....
“ “ “	1889	.....	.....
“ “ “	1890	.....	.....
“ “ “	1891	124,568 23	.....
“ “ “	1892	.....	.....
“ “ “	1893	.....	.....
“ “ “	1894	17 99	.....
Total.....		*333,942 72	.....

*Included in total cost of Intercolonial Railway system, page 75.

W. C. LITTLE,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

NATIONAL TRANSCONTINENTAL RAILWAY.

	Year.	Construction.	Working Expenses.	Revenue.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure since Confederation.....	1904	6,249 40		
" " "	1905	778,491 28		
" " "	1906	1,841,269 95		
" " "	1907	5,537,867 50		
" " "	1908	18,910,449 41		
" " "	1909	24,892,422 68		
" " "	1910	19,968,126 86		
" " "	1911	23,488,208 40		
" " "	1912	21,110,683 05		
" " "	1913	13,766,916 39		
" " "	1914	12,670,108 27	94,074 10	44,634 11
Total.....	*	142,970,793 19	94,074 10	44,634 11

*Agrees with Public Accounts Balance Sheet, 1913-1914, page 4.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

OXFORD AND NEW GLASGOW RAILWAY.

	Year.	Capital.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure since Confederation.....	1888	280,932 35	
" " "	1889	840,553 57	
" " "	1890	434,074 60	
" " "	1891	220,886 39	
" " "	1892	48,745 23	
" " "	1893	7,922 80	
" " "	1894	112,382 75	
" " "	1895	*	
" " "	1896	*	
" " "	1897	3,565 52	
Total.....		†1,949,063 21	†

* Included in Intercolonial Railway capital. † Included in Intercolonial Railway working expenses.

† Included in total cost of Intercolonial Railway system, page 75. Add \$220.48 amount of Exchequer Court Award paid in 1907 and included in Intercolonial Ry.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

QUEBEC BRIDGE.

	Year.	Capital.	Income.
		\$ cts.	\$ cts.
Government expenditure since Confederation.....	1909		422,867 12
“ “ “	1910		111,788 02
“ “ “	1911	227,563 40	
“ “ “	1912	603,293 07	
“ “ “	1913	1,512,825 96	
“ “ “	1914	2,604,105 61	
Total.....		4,947,788 04	534,655 14
Less amount received from the Phoenix Bridge Co., 1910.....			100,000 00
Total.....		*4,947,788 40	434,655 14

*Expenditure as above.....	4,947,788 04
Add amounts paid by the Finance Department not included above:—	
Amount guaranteed by Act of 1903, Chap. 54.....	6,424,781 00
Amount paid to the Province of Quebec.....	250,000 00
Amount paid to city of Quebec.....	300,000 00
Amount paid to Emile Tanguay, as per Supreme Court award.....	485 20

Less amount received from The Phoenix Bridge Co.....	\$11,923,054 24
	100,000 00

Agrees with Public Accounts Balance sheet, page 2.....	\$11,823,054 24
To which add the expenditure under Income during 1909 and 1910.....	534,655 14
Add also amount paid for subsidies in 1901, 1902 and 1903.....	374,353 33

Total expenditure to date of March 31, 1914.....	\$12,732,062 71
--	-----------------

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

YUKON TERRITORY WORKS.

(Stikine-Teslin Railway.)

	Year.	Construction.
		\$ cts.
Government expenditure since Confederation.....	1902	283,323 55
Total.....		*283,323 55

* Included in Public Accounts Balance Sheet, 1902-1903, page 6.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

STATEMENT showing amount expended on Capital Account on Railways.

Railways.		
	\$	cts.
Intercolonial, pages 74-75.....	91,717,345	46
Cape Breton, page 71.....	3,860,679	14
Oxford and New Glasgow, page 77.....	1,949,063	21
Eastern Extension, page 73.....	1,324,042	81
Drummond County, page 72.....	1,464,000	00
Montreal and European Short Line, page 76.....	333,942	72
Canada Eastern, page 69.....	819,000,00	
Total.....	101,468,073	34
Carleton Branch, page 71.....	48,410	48
Prince Edward Island, page 78.....	8,920,369	01
Canadian Pacific, page 70.....	62,789,776	09
Annapolis and Digby, page 68.....	660,683	09
Yukon Territory Works (Stikine-Teslin Ry.), page 79.....	283,323	55
National Transcontinental, page 77.....	142,970,793	19
Governor General's Cars.....	71,538	82
Hudson Bay Railway, page 73.....	6,087,032	67
Total.....	323,300,000	24
<i>Memo re Recapitulation—Railways.</i>		
Total cost as per statement above.....	323,300,000	24
Add amounts transferred from Capital to Consolidated Fund, Intercolonial Railway, see statement, page 75.....	296,872	90
Agreeing with total amount paid on Construction, as per statement, page 81.....	*323,596,873	14

* Amounts paid for Quebec Bridge, page 79, and amount of Miscellaneous Expenditure, page 82, not included in above.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

RECAPITULATION—GOVERNMENT RAILWAYS.

	Year.	Construction.	Working expenses.	Revenue.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation since	1868	13,881,460 65		
" " "	1868	483,353 65	359,961 08	420,752 58
" " "	1869	282,615 18	387,548 47	455,022 76
" " "	1870	1,729,381 49	445,208 75	471,245 09
" " "	1871	2,946,930 45	442,993 31	565,713 52
" " "	1872	5,620,569 67	595,076 22	622,909 56
" " "	1873	5,763,268 81	1,011,892 60	703,458 26
" " "	1874	3,925,123 69	1,847,925 24	893,430 17
" " "	1875	5,018,427 85	1,581,934 24	886,087 42
" " "	1876	4,497,434 75	1,497,128 22	966,922 42
" " "	1877	3,209,502 16	1,890,268 80	1,285,110 27
" " "	1878	2,643,741 73	2,032,873 05	1,514,846 38
" " "	1879	2,507,053 71	2,233,496 34	1,419,955 60
" " "	1880	6,109,077 14	1,851,489 26	1,739,137 25
" " "	1881	5,577,236 73	2,220,421 39	2,200,486 25
" " "	1882	5,175,046 61	2,310,638 54	2,237,583 39
" " "	1883	11,707,619 02	2,636,551 70	2,541,205 41
" " "	1884	14,013,074 89	2,613,508 87	2,551,937 97
" " "	1885	11,224,244 54	2,749,710 53	2,624,243 07
" " "	1886	4,443,220 17	2,819,973 50	2,628,336 35
" " "	1887	1,846,887 18	3,152,650 40	2,840,747 88
" " "	1888	1,765,582 11	3,621,076 62	3,166,253 22
" " "	1889	2,709,857 37	3,513,063 67	3,167,542 67
" " "	1890	2,392,767 99	3,846,044 42	3,203,874 11
" " "	1891	1,184,317 34	3,949,263 73	3,181,888 56
" " "	1892	417,425 73	3,748,597 77	3,136,393 51
" " "	1893	712,917 44	3,288,629 62	3,262,505 62
" " "	1894	585,749 01	3,226,208 13	3,179,019 57
" " "	1895	376,814 83	3,197,846 17	3,129,450 37
" " "	1896	324,774 72	3,254,442 64	3,140,678 47
" " "	1897	204,624 31	3,195,959 58	3,060,074 38
" " "	1898	270,990 85	3,507,248 88	3,313,847 10
" " "	1899	1,112,348 47	3,696,612 31	3,940,570 11
" " "	1900	3,309,130 42	4,665,228 06	4,774,161 87
" " "	1901	3,922,989 37	5,739,051 54	5,213,381 24
" " "	1902	5,386,611 24	5,861,099 54	5,918,990 43
" " "	1903	3,083,680 86	6,474,134 20	6,584,598 77
" " "	1904	2,619,059 86	7,599,958 57	6,627,255 51
" " "	1905	6,125,481 79	8,906,154 35	7,050,892 11
" " "	1906	6,702,565 74	7,893,653 49	7,950,552 97
" " "	1907	7,174,370 17	6,328,745 65	6,509,186 49
" " "	1908	23,684,005 25	9,595,295 43	9,534,569 04
" " "	1909	29,414,227 34	9,764,586 51	8,894.4 0 42
" " "	1910	21,505,975 91	9,095,903 96	9,647,963 71
" " "	1911	24,532,466 18	10,037,878 77	10,249,394 38
" " "	1912	23,108,805 52	11,074,852 80	11,034,165 83
" " "	1913	17,375,968 10	12,499,925 65	12,442,203 46
" " "	1914	21,628,095 15	13,559,225 45	13,394,317 37
Total		*323,636,873 14	205,821,938 02	194,277,273 89

Total amount paid on construction \$323,636,873 14

Less amount received from the City of St. John, N.B., as purchase price of the Carleton Branch Railway 40,000 00

Cost of construction †\$323,596,873 14

* Amount paid for Quebec Bridge and amount of Capital Expenditure, page 82, not included.

† Agreeing with amount expended on Capital Account on Railways, etc., see page 80.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SESSIONAL PAPER No. 20

MISCELLANEOUS EXPENDITURE ON RAILWAYS AND CANALS.

STATEMENT Showing Expenditure common to both Railways and Canals from Confederation to March 31, 1914.

—		Year end- ing.	Capital.	Income.	Revenue.	Total.
			\$ cts.	\$ cts.	\$ cts.	\$ cts.
Gov't exp. prior to Confederation.....						
"	since	" 1868 to 1878		232,839 35	69,113 66	301,953 01
"	"	" 1879 to 1892				
"	"	" 1893		28,640 93		28,640 93
"	"	" 1894		15,746 31		15,746 31
"	"	" 1895		19,304 87		19,304 87
"	"	" 1896		25,194 21		25,194 21
"	"	" 1897		25,142 90	597 39	25,740 29
"	"	" 1898		28,042 10		28,042 10
"	"	" 1899		22,085 19		22,085 19
"	"	" 1900		22,802 18		22,802 18
"	"	" 1901		33,986 68		33,986 68
"	"	" 1902		34,138 50		34,138 50
"	"	" 1903		35,398 00		35,398 00
"	"	" 1904		36,262 32		36,262 32
"	"	" 1905		38,660 52		38,660 52
"	"	" 1906		37,484 64		37,484 64
"	"	" 1907		34,183 75		34,183 75
"	"	" 1908		45,115 99		45,115 99
"	"	" 1909		20,912 04		20,912 04
"	"	" 1910		4,706 79		4,706 79
"	"	" 1911		2,369 52		2,369 52
"	"	" 1912		2,922 06		2,922 06
"	"	" 1913		9,338 17		9,338 17
"	"	" 1914		5,671 08		5,671 08
Total.....				760,948 10	69,711 05	830,659 15

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

5 GEORGE V., A. 1915

STATEMENT showing the TOTAL EXPENDITURE and REVENUE of the Department of Railways and Canals prior to and since Confederation to March 31, 1914.

TOTAL EXPENDITURE. \$749,050,192 28

Expenditure on Railways.	\$532,379,298 90	
" Quebec Bridge.	5,382,443 18	
" Railway Subsidies.	67,566,152 69	
" Canals.	142,891,638 36	
" Miscellaneous.	830,659 15	
Total expenditure.		\$749,050,192 28

CLASSIFICATION OF EXPENDITURE IN GENERAL—

Capital Account.	\$435,247,569 04	
Revenue "	233,700,116 84	
Income "	12,536,353 71	
Consolidated Fund—Railway Subsidies.	67,566,152 69	
Total expenditure.		\$749,050,192 28

CLASSIFICATION OF EXPENDITURE IN DETAIL—

Railways—		
Capital—See pages 80 and 82.	\$323,318,000 24	
Income—See pages 74, 75 and 82.	3,173,570 67	
Revenue—See pages 81 and 82.	205,887,727 99	
		\$532,379,298 90
Quebec Bridge—		
Capital—See page 79.	\$ 4,947,788 04	
Income—See page 79.	434,655 14	
		5,382,443 18
Railway Subsidies—See pages 86 to 97.		
	\$67,566,152 69	
		67,566,152 69
Canals—		
Capital—See pages 63 and 83.	\$106,981,780 76	
Income—See pages 63 and 83.	8,167,179 80	
Revenue—See pages 63 and 83.	27,742,677 80	
		142,891,638 36
Miscellaneous Expenditure—		
Income—See page 83.	\$760,948 10	
Revenue—See page 83.	69,711 05	
		830,659 15
Total expenditure.		\$749,050,192 28

CLASSIFICATION OF EXPENDITURE INTO CAPITAL AND CONSOLIDATED FUND—

Railways—		
Capital—Including Quebec Bridge.	\$328,265,788 28	
Consolidated Fund (Income and Revenue)—		
Railway Subsidies, etc.	277,062,106 49	
		\$605,327,894 77
Canals—		
Capital.	\$106,981,780 76	
Consolidated Fund (Income and Revenue)	35,909,857 60	
		142,891,638 36
General Expenditure—		
Consolidated Fund (Income and Revenue)	\$830,659 15	
		830,659 15
Total expenditure.		\$749,050,192 28

TOTAL REVENUE RECEIVED from July 1, 1867 to March 31, 1914—

Railways—See page 81.	\$194,277,273 89	
Canals—See page 63.	15,329,362 83	
Total Revenue.		\$209,606,636 72

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

SUBSIDY STATEMENTS

- I.—Statement showing the Railway Subsidies paid during the year ending March 31, 1914.
- II.—Statement of Railway Subsidies paid from July 1, 1873, to March 31, 1914.

5 GEORGE V., A. 1915

STATEMENT showing the Railway Subsidies paid during the year ending March 31, 1914.

NAME OF RAILWAY.		Amount.
1.	Algoma Eastern Railway Company, Ontario (Formerly Manitoulin and North Shore Railway Company)— From Little Current thence crossing Canadian Pacific Railway at or near Stanley to Sudbury.	\$ 179,897 01
2.	Canadian Northern Pacific Railway Company, B.C.— From a point at Yellow Head Pass to Vancouver and the mouth of the Fraser River.	2,520,281 00
3.	Canadian Northern Alberta Railway Company, Alberta— From the city of Edmonton in the province of Alberta to the boundary of the province of British Columbia at the Yellow Head Pass.	2,832,024 00
4.	Canadian Northern Ontario Railway Company, Ontario— From Ottawa to Port Arthur. \$7,585,687 08 From Toronto to Ottawa. 1,363,122 39	8,948,809 47
5.	Northern New Brunswick and Seaboard Railway, N.B.— From Drummond Mines at Austin Brook to a point on the Intercolonial Railway.	21,632 00
6.	Algoma Central and Hudson Bay Railway, Ontario— From Sault Ste. Marie to a point on the Canadian Pacific Railway between White River and Dalton Station in District of Algoma. From a point fifty miles northerly from the junction of its line of railway with Canadian Pacific Railway northerly with National Transcontinental Railway.	456,304 00
7.	St. John and Quebec Railway Company, N.B.— From Andover to St. John, N.B.	364,617 42
8.	Central Railway Company of Canada, Quebec— From a point at or near Ste. Agathe des Monts Station towards the township of Howard in county of Argenteuil, etc.	30,145 02
9.	Temiskaming and Northern Ontario Railway Company, Ont.— From North Bay to Cochrane, 333.45 miles.	2,134,080 00
10.	Southampton Railway Company, N.B.— From a point at or near Millville to a point on the St. John River, N.B., near Pokiok Bridge.	32,837 12
11.	Lake Erie and Northern Railway, Ontario— From the town of Galt to Port Dover.	135,129 60
12.	Quebec and Saguenay Railway Company, Quebec— From St. Joachim northeasterly.	116,167 68
13.	Canadian Pacific Railway— From Moosejaw in a northwesterly direction. \$103,682 27 Saskatchewan Bridge over Saskatchewan River at Outlook. 115,000 00 Bridge over North Saskatchewan River at Edmonton, Alberta. 126,000 00	344,682 27
14.	Alberta Central Railway, Alberta— From Red Deer to Rocky Mountain House.	119,712 00
15.	Ha-Ha Bay Railway Company, Quebec— (a) From a point on the Quebec and Lake St. John Railway, in the township of Jonquières, at or near St. Mathias, to Ha-Ha Bay not exceeding twenty miles; (b) From Labrosse Junction to the Saguenay River northerly through the town of Chicoutimi; not exceeding five miles; (c) From La Terrière Junction, southerly, to Lake Kenogami, via La Terrière Village; not exceeding twelve miles; (d) From a point on the Ha Ha Bay Railway, at or near Bagotville Village, easterly, to the village of St. Alexis; not exceeding three miles.	66,919 28

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STATEMENT showing the Railway Subsidies paid during the year ending
March 31, 1914.—*Concluded.*

NAME OF RAILWAY.	Amount.
16. Kettle Valley Railway Company, B.C.— From Merritt to Penticton wharf— From a point on the line between Merritt to Penticton wharf, about 25 miles south of Merritt to a point on the Fraser River near Hope Station. From Midway to Merritt...	\$699,389 60
17. Central Ontario Railway, Ontario— From a point $1\frac{1}{2}$ miles north of Bancroft to Whitney..	969 30
18. Tilsonburg, Lake Erie and Pacific Railway Company, Ont.— From Ingersoll north to a junction with the St. Mary's Western Ontario Railway at Embro...	32,640 00
Total...	<u>\$19,036,236 77</u>

DEPARTMENT OF RAILWAYS AND CANALS,
Ottawa, September 1, 1914.

W. C. LITTLE,
Accountant.

5 GEORGE V., A. 1915

STATEMENT showing subsidies voted for Railways as to which contracts

Subsidies Voted.		Number.	Railways.	July 1, 1883, to June 30, 1907.	
Authority.	Amount.			\$	cts.
	\$ cts.			\$	cts.
46 Vic., chap. 25	156,800 00	1	International Railway, Quebec.....	156,800	00
53 " " 2	384,000 00				
45 " " 14	80,000 00				
46 " " 25	9,000 00				
48-49 " " 50	186,295 00				
49 " " 10	28,800 00				
50 1 " " 24	96,000 00	2	Quebec and Lake St. John Railway, Quebec ..	1,160,471	50
51 " " 3	64,000 00				
52 " " 3	30,000 00				
53 " " 2	5,250 00				
54-5 " " 8	44,800 00				
57-8 " " 4	80,600 00				
46 " " 24	70,000 00				
49 " " 10	12,800 00	3	Kingston, Napanee and Western Railway, formerly		
50-1 " " 24	32,000 00		Napanee, Tamworth and Quebec Ry., Ontario...	208,732	80
52 " " 3	64,000 00				
55-6 " " 5	272,000 00				
47 " " 8	41,000 00	4	Pontiac Pacific Junction Railway, Quebec.....	193,578	00
51 " " 3	24,000 00				
53 " " 2	115,200 00				
46 " " 25	76,800 00	5	Caraquette Railway, N. B.	224,000	00
47 " " 8	32,000 00				
50-1 " " 24	57,600 00				
47 " " 8	22,400 00	6	Canadian Northern Quebec Ry. Co., formerly Great		
49 " " 10	48,000 00		Northern Ry., Quebec.....	557,788	31
52 " " 3	48,000 00				
53 " " 2	70,400 00				
56 " " 2	48,000 00				
57-8 " " 4	48,000 00	7	Kingston and Pembroke Railway, Ontario ...	48,000	00
7-8 Ed. VII 63	660,000 00				
47 " " 8	660,000 00	8	Northern and Pacific Junction Railway, Ontario...	1,320,000	00
45 " " 14	128,000 00				
46 " " 26	19,200 00				
53 " " 2	32,000 00				
47 " " 8	32,000 00				
48-9 " " 50	24,439 84	9	Canada Eastern Ry., formerly Northern and West-		
49 " " 10	140,800 00		ern Ry., N.B., including also Chatham Branch	374,839	84
48-9 " " 50	35,200 00		Ry.		
51 " " 3	60,342 00	10	Quebec Central Railway, Quebec.....	348,342	00
57 8 " " 4	60,342 00				
62 3 " " 7	288,000 00				
47 " " 8	72,000 00				
51 " " 3	40,000 00				
7-8 " " 63	30,000 00				
53 " " 2	30,000 00				
48-9 " " 50	64,000 00	11	Montreal and Sorel Railway, Quebec.	93,757	57
53 " " 2	9,600 00				
48-9 " " 50	38,400 00	12	Montreal and Champlain Junction Railway, Quebec.	103,600	00
50-1 " " 24	44,252 82				
51 " " 3	22,400 00	13	Elgin, Petitediac and Havelock Railway, N.B....	82,652	82
46 " " 25	96,000 00	14	St. Louis and Richibucto Railway, N.B.....	22,400	00
51 " " 3	38,400 00				
46 " " 25	180,000 00	15	Canada Atlantic Railway, Ontario.....	282,355	20
47 " " 6	750,000 00				
48 " " 8	96,000 00	16	Esquimaux and Nanaimo Railway, B.C.....	750,000	00
46 " " 25	320,000 00	17	Erie and Huron Railway, Ontario.....	96,000	00
47 " " 8	300,000 00				
52 " " 3		18	Baie des Chaleurs Railway, Quebec	620,000	00
			Carried forward.....	6,643,318	04

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have been entered into and payments made up to March 31, 1914.

Payments.							Total, March 31, 1914.	Number.
1907-1908.	1908-1909.	1909-1910.	1910-1911.	1911-1912.	1912-1913.	1913-1914.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
							156,800 00	1
73,472 00				27,520 00			1,261,463 50	2
							208,732 80	3
							193,578 00	4
							224,000 00	5
256,870 40	55,449 60	164,172 29	144,608 51	86,468 03			1,265,357 14	6
							48,000 00	7
							1,320,000 00	8
							374,839 84	9
55,638 69			129,320 61		8,576 00		541,877 30	10
							93,757 57	11
							103,600 00	12
							82,652 82	13
							22,400 00	14
							282,355 20	15
					365,440 00		1,115,440 60	16
							96,000 00	17
							620,000 00	18
385,981 09	55,449 60	164,172 29	273,929 12	113,988 03	374,016 00		8,010,854 17	

5 GEORGE V., A. 1915

STATEMENT showing subsidies voted for Railways as to which contracts

Subsidies Voted.		Number.	Railways.	July 1, 1883, to June 30, 1907.	
Authority.	Amount.				
	\$ cts.			\$	cts.
			Brought forward	6,643,318	04
48-9 Vic, c. 59	118,400 00	1	New Brunswick and Prince Edward Island Ry	113,440	00
50-1 " 24	217,600 00	2	Laurentian Railway, formerly St. Lawrence, Lower Laurentian and Saguenay Railway, Quebec.	217,600	00
49 " 10	11,200 00	3	L'Assomption, Railway, Quebec	11,200	00
49 " 10	32,000 00				
50-1 " 24	96,000 00	4	Great Eastern Railway, Quebec	40,345	00
56 " 2	64,000 00				
53 " 2	37,500 00				
47 " 8	160,000 00	5	Irondale, Bancroft and Ottawa Railway, Ontario.	144,000	00
52 " 3					
49 " 10	96,000 00	6	Buetoche and Moncton Railway, N. B.	101,600	00
50-1 " 24	6,400 00				
47 " 8	51,200 00	7	Albert Southern Railway, N.B.	50,460	00
52 " 3					
50-1 " 24	65,200 00	8	Lake Temiscamingue Colonisation Railway, Quebec	310,335	95
57-8 " 4	274,940 00				
49 " 10	38,400 00	9	Joggins Railway, N.S.	37,500	00
50-1 " 24	4,000 00				
45 " 14	240,000 00				
48-9 " 58	258,000 00	10	Temisconata Railway, N.B., and Quebec.	645,950	00
51 " 3	100,000 00				
53 " 2	51,200 00				
48-9 " 50	44,800 00	11	Leamington and St. Clair Railway, Ontario.	51,200	00
50-1 " 24	6,400 00				
59 " 10	16,000 00	12	Toronto, Grey and Bruce Railway, Ontario.	14,656	00
50-1 " 24	22,400 00	13	Dominion Lime Co., Quebec.	15,360	00
49 " 10	256,000 00	14	West Ontario Pacific Railway and Ontario and Quebec Railway.	256,000	00
53 " 2					
50-1 " 24	96,000 00				
52 " 3	14,400 00	15	Drummond County Railway, Quebec.	423,936	00
53 " 2	76,800 00				
57-8 " 4	96,000 00				
48-9 " 59	128,000 00	16	Brockville, Westport and Sault Ste. Marie Railway, Ontario.	140,800	00
53 " 2					
54-5 " 8	64,000 00				
57-8 " 4					
49 " 10	32,000 00	17	Montreal and Lac Maskinonge Railway, Quebec.	41,280	00
53 " 2	10,200 00				
50-1 " 24	54,400 00	18	South Norfolk Railway, Ontario.	54,400	00
50-1 " 24	51,200 00	19	Guelph Junction Railway, Ontario.	46,000	00
48-9 " 54	22,400 00	20	Belleville and North Hastings Railway, Ontario.	21,888	00
49 " 19					
49 " 10	108,800 00	21	Hereford Railway, Quebec.	155,200	00
52 " 0	48,000 00				
50-1 " 23	118,400 00	22	Lake Erie and Detroit River Railway, Ontario.	475,851	00
55-6 " 4	224,000 00				
62-3 " 5	*				
50-1 " 27	62,400 00	23	Beauharnois Junction Railway, Quebec.	62,400	00
56 " 4					
50-1 " 24	138,400 00				
55-6 " 5	108,000 00	24	St. Catharines and Niagara Central Ry., Ontario.	38,400	00
57-8 " 4	108,800 00				
52 " 3	30,000 00	25	Fredericton and St. Mary's Ry. Bridge Co., N.B.	30,000	00
50-1 " 24	9,600 00	26	Harvey Branch Railway Co., N.B.	5,553	57
55-6 " 5	240,000 00	27	Nova Scotia Central Railway Co., N.S.	235,200	00
61 " 1					
50-1 " 24	44,800 00	28	Cumberland Railway and Coal Co., N.S.	39,850	00
52 " 3	19,200 00	29	Pontiac and Renfrew Railway, Ontario.	13,600	00
52 " 3	54,400 00	30	Thousand Islands Railway, Ontario.	29,840	00
43-4 " 8	*				
			Carried forward.	10,467,163	56

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have been entered into and payments made up to March 31, 1914.—*Continued.*

Payments.							Total March 31, 1914.	Number.
1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
385,981 09	55,449 60	164,172 29	273,929 12	113,988 03	374,016 00	.....	8,010,854 17	
.....	113,440 00	1
.....	217,600 00	2
.....	11,200 00	3
.....	40,345 00	4
.....	144,000 00	5
.....	101,600 00	6
.....	50,460 00	7
.....	310,335 95	8
.....	37,500 00	9
.....	645,950 00	10
.....	51,200 00	11
.....	14,656 00	12
.....	15,360 00	13
.....	256,000 00	14
.....	423,936 00	15
.....	140,800 00	16
.....	41,280 00	17
.....	54,400 00	18
.....	46,000 00	19
.....	21,888 00	20
.....	155,200 00	21
.....	475,851 00	22
.....	62,400 00	23
.....	38,400 00	24
.....	30,000 00	25
.....	5,553 57	26
.....	235,200 00	27
.....	39,850 00	28
.....	13,600 00	29
.....	29,840 00	30
385,981 09	55,449 60	164,172 29	273,929 12	113,988 03	374,016 00	.....	11,834,699 69	

5 GEORGE V., A. 1315

STATEMENT showing subsidies voted for Railways as to which contracts

SUBSIDIES VOTED.		Number.	Railways.	July 1, 1883, to June 30, 1907.	
Authority	Amount.			£	cts.
	£ cts.			£	cts.
			Brought forward.	10,467,163	56
52 Vic., chap. 3	96,000 00	1	Quebec, Montmorency and Charlevoix Ry. Co., Que.	96,000	00
56 " 3	375,000 00	2	St. Clair Frontier Tunnel Co., Ontario	375,000	00
52 " 3	57,600 00	3	Brantford, Waterloo and Lake Erie, Ry., Ontario...	57,600	00
50-1 " 24	287,200 00	4	Port Arthur, Duluth and Western Ry., Ontario....	271,200	00
57-8 " 4					
51 " 3					
53 " 2					
50-1 " 24	192,000 00	5	Montreal and Ottawa Railway, Ontario	192,000	00
53 " 2					
54-5 " 8					
57-8 " 4					
50-1 " 24	44,800 00	6	Cornwallis Valley Railway, N.S.	44,800	00
52 " 3	320,000 00				
52 " 3	64,000 00	7	Ottawa, Northern and Western Ry., Quebec, formerly Ottawa and Gatineau Valley Railway.	410,688	00
57-8 " 6	*				
60-1 " 4					
47 " 8					
51 " 3					
52 " 3	83,612 00				
53 " 2	142,400 00	8	Central Railway, N. B.	226,012	54
57-8 " 4	48,000 00				
61 " 1					
62-3 " 1					
53 " 2	361,270 00	9	Montreal and Western Railway, Quebec	361,270	00
5 " 3	128,000 00	10	Parry Sound and Colonization Railway, Ontario....	152,800	00
57-8 " 4	64,000 00				
52 " 3	163,200 00	11	Shuswap and Okanagan Railway, B.C.	163,200	00
51-5 " 8	89,600 00				
53 " 2	35,200 00	12	Tobique Valley Railway, N. B.	134,016	00
55-6 " 5	9,600 00				
53 " 2	112,000 00	13	Columbia and Kootenay, B.C.	88,800	00
53 " 2	35,200 00	14	Waterloo Junction Railway, Ontario.	32,800	00
53 " 2	99,200 00	15	Orford Mountain Railway Co., Quebec.	168,814	50
53 " 2	57,600 00				
53-6 " 5	25,024 00	16	St. Lawrence and Adirondack Railway, Quebec....	149,481	60
53-6 " 5	*40,000 00	17	New Glasgow Iron, Coal and Railway Co., N.S.	39,840	00
56 " 2	102,400 00	18	United Counties Railway Co., Quebec.	188,816	00
57-8 " 4	102,400 00				
55-6 " 5	*21,600 00	19	Phillipsburg Junction Ry. Quarry Company, Quebec.	23,712	00
55-6 " 5	*430,400 00	20	Ottawa, Arnprior and Parry Sound Ry., Ontario....	779,712	00
56 " 2	67,200 00				
57-8 " 4	38,400 00	21	Montford Colonization Railway, Quebec.	167,440	00
60-1 " 4	66,000 00				
55-6 " 5	48,000 00				
57-8 " 4	48,000 00	22	Lotbinière and Megantic Railway, Quebec.	96,000	00
56 " 2	48,000 00	23	Grand Trunk, Georgian Bay and Lake Erie Ry., Ont.	39,744	00
55-6 " 5	80,000 00	24	Canadian Pac. Ry., B.C., Revelstoke to Arrow Lake.	80,000	00
57-8 " 4	121,600 00	25	Nakusp and Slocan Railway, B.C.	117,760	00
55-6 " 5	89,600 00	26	Division Coal Company, N.S.	87,808	00
56 " 2	22,400 00	27	Oshawa Railway and Navigation Company, Ontario.	22,400	00
57-8 " 4	*51,200 00	28	Tilsonburg, Lake Erie and Pacific Ry., Ontario....	117,431	48
56 " 2	*11,200 00	29	St. Stephen and Milltown Ry., N.B.	14,848	00
57-8 " 4	*38,400 00	30	Gulf Shore Railway Company, N.B.	53,699	20
57-8 " 4	9,000 00	31	Cap de la Magdeleine Railway, Quebec.	7,424	00
56 " 2	32,000 00	32	Ontario, Belmont and Northern Ry. Company, Ont.	30,720	00
" "	*	33	Coast line of N.S., now Halifax and Yarmouth Ry.	160,000	00
" "	*	34	Ottawa and New York Railway Company, Ontario.	262,384	00
			Carried forward.	15,681,384	88

SESSIONAL PAPER No. 20

have been entered into and payments made up to March 31, 1914.—*Continued.*

Payments.							Total March 31, 1914.	Number.
1907-08.	1908-09.	1909-10.	1910 11.	1911-12.	1912-13.	1913-14.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
385,981 09	55,449 60	164,172 29	273,929 12	113,988 03	374,016 00	.....	11,834,699 69	
.....	96,000 00	1
.....	375,000 00	2
.....	57,600 00	3
.....	271,200 00	4
.....	192,000 00	5
.....	44,800 00	6
4,243 20	414,931 20	7
.....	226,012 54	8
.....	361,270 00	9
.....	152,800 00	10
.....	163,200 00	11
.....	134,016 00	12
.....	88,800 00	13
.....	32,800 00	14
24,128 00	9,984 00	.....	202,926 50	15
.....	149,481 60	16
.....	39,840 00	17
.....	188,816 00	18
.....	23,712 00	19
.....	779,712 00	20
.....	167,440 00	21
.....	96,000 00	22
.....	39,744 00	23
.....	80,000 00	24
.....	150,071 48	25
.....	87,808 00	26
.....	22,400 00	27
.....	32,640 00	117,431 48	28
.....	14,848 00	29
.....	53,699 20	30
.....	7,424 00	31
.....	39,720 00	32
.....	160,000 00	33
.....	262,384 00	34
414,352 29	55,449 60	164,172 29	273,929 12	713,988 03	384,000 00	32,640 00	17,119,916 21	

5 GEORGE V., A. 1915

STATEMENT showing subsidies voted for Railways as to which contracts

Subsidies Voted.		Number.	Railways.	July 1, 1883, to June 30, 1907.	
Authority.	Amount.			\$	cts.
	\$ cts.			\$	cts.
			Brought forward.....	15,681,384	88
60-61 Vic., c. 5	3,630,000 00	1	Canadian Pacific Ry. Co., B.C. (Crow's Nest Pass)..	3,404,720	00
60-61 " " 4	500,000 00	2	Grand Trunk Ry. Co. 'Victoria Jubilee Bridge,' Que.	500,000	00
63 " " 3		3	International Ry. of New Brunswick, formerly Restigouche and Western Ry. Co.....	178,408	07
*7-8 Ed. VII, 63	*	4	East Richelieu Railway Co., Quebec.....	69,952	00
" " "	*	5	South Shore Ry. (Quebec, Montreal and Southern)	203,240	81
7-8 Ed. VII, 63	*	6	Pembroke Southern Railway, Ontario.....	64,000	00
" " "	*	7	Massawippi Valley Railway Co., Quebec.....	5,376	00
" " "	*	8	Inverness and Richmond Ry. Co., N.S., now Inverness Ry. and Coal Co.....	368,545	97
" " "	*	9	Canadian Northern Railway Co., Ontario, Manitoba and N.W.T.....	1,909,132	00
" " "	*	10	Canadian Pacific Railway Co. (Pipestone Branch)..	160,000	00
6-7 Ed. VII, 40	*	11	Central Ontario Railway Co., Ontario.....	67,200	00
" " "	*	12	Midland Railway Co., N.S.....	367,168	00
62-3 Vic., c. 7	1,000,000 00	13	Quebec Bridge Co., Quebec.....	374,353	33
63-4 " " 8		14	St. Mary River Railway Co., N.W.T.....	148,094	00
60-1 Vic., c. 4	212,500 00	15	(Pontiac and Pacific and Ottawa and Gatineau Ry. Co. (Interprovincial Bridge over Ottawa River)..	212,500	00
63-4 " " 2		16	Atlantic and Lake Superior Ry., Quebec.....	144,969	02
1 Ed. VII, c. 7	*	17	Montreal and Province Line Railway, Quebec.....	58,560	00
1 " " 7	*	18	York and Carleton Railway, N.B.....	18,336	00
62-3 Vic., c. 7	*	19	Algoma Central and Hudson Bay Railway, Ontario..	924,976	00
62-3 " " 7		20	Cape Breton Extension Railway, N.S.....	182,400	00
63-4 " " 8	*	21	Can. Pac. Ry. Co. (Kootenay and Arrowhead Branch)	153,866	00
1 Ed. VII, c. 7	*	22	" (Selkirk Branch).....	83,200	00
" " "	*	23	" (Dyment Branch).....	22,336	00
" " "	*	24	" (Waskada Branch).....	64,000	00
9-10 Ed. VII, 51	*	25	Algoma Eastern Railway Co., formerly Manitoulin and North Shore Ry. Co., Ontario.....	32,000	00
" " "	*	26	Bay of Quinte Railway, Ont.....	141,722	45
" " "	*	27	Bruce Mines and Algoma Railway, Ont.....	53,920	00
" " "	*	28	Maganetawan River Railway Co., Ont.....	3,552	00
" " "	*	29	Canadian Northern Quebec Ry., formerly Chateauguay and Northern Ry., Quebec.....	391,819	75
" " "	*	30	Canadian Pacific Ry. Co. (Pheasant Hill Branch)...	435,200	00
" " "	*	31	Halifax and Southwest-rn Railway Co., N.S.....	921,883	20
" " "	*	32	Northern Colonization Railway Co., Quebec.....	133,760	00
" " "	*	33	New Brunswick Coal and Railway Co., N.B.....	48,000	00
" " "	*	34	Schomberg and Aurora Railway Co., Ont.....	46,144	00
" " "	*	35	Lindsay, Bobcaygeon and Pontypool Ry. Co., Ont...	185,173	06
" " "	*	36	Middleton and Victoria Beach Ry. Co., N.S.....	125,760	00
Ed. VII, c. 57	*	37	Nicola, Kamloops and Similkameen Coal and Ry. Co.	110,592	06
4 " " 34	*	38	Canadian Pacific Ry. (Staynerville Branch).....	9,600	00
6 " " 43	*	39	Klondike Mines Railway.....	96,000	00
6 " " 43	*	40	Kettle River Valley Ry. Co., B.C.....		
6 " " 43	*	41	Colchester Coal and Ry. Co., N.S.....		
3 " " 57	*	42	Minudie Coal Co., N.S.....		
6 " " 43	*	43	Atlantic, Quebec and Western Ry. Co., Quebec.....		
9-10 " " 51	*	44	Napierville Junction Ry. Co., Quebec.....		
6 " " 43	*	45	Edmonton, Yukon and Pac. Ry. Co., Alberta.....		
6-7 " " 40	*	46	Canadian Northern Ontario Ry. Co.....	1,071,872	00
6-7 " " 40	*				
7-8 " " 63					
			Carried forward.....	29,173,716	54

†Of this amount, \$16,164.43 were in connection with subsidy to Montreal and Sorel Railway.

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have been entered into and payments made up to March 31, 1914—*Continued.*

Payments.							Total, March 31, 1914.	Number.
1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	\$ cts.	
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
414,352 29	55,449 60	164,172 29	273,929 12	113,988 03	384,000 00	32,640 00	17,119,916 21	
							3,404,720 00	1
							500,000 00	2
	189,849 60	187,494 40	169,536 00				725,288 07	3
	43,414 55	184,320 00	60,000 00	23,835 70			69,952 00	4
							514,811 06	5
							64,000 00	6
							5,376 00	7
							368,545 97	8
							1,909,132 00	9
							160,000 00	10
76,861 36	35,404 64		24,601 32	826 17		969 50	205,862 79	11
31,892 40							399,060 40	12
							374,353 33	13
							148,094 00	14
							212,500 00	15
							144,969 02	16
							58,560 00	17
14,560 00							32,896 00	18
				133,584 00	394,859 44	456,304 00	1,909,723 44	19
		14,400 00					196,800 00	20
							153,866 00	21
							83,200 00	22
							22,336 00	23
							64,000 00	24
			68,638 72		254,089 40	179,897 01	534,625 13	25
							141,722 45	26
							53,920 00	27
							3,552 00	28
							391,819 75	29
							435,200 00	30
316,567 73							1,238,450 93	31
	68,320 00	153,120 00					355,200 00	32
							48,000 00	33
							46,144 00	34
							185,173 06	35
							125,760 00	36
190,208 00							300,800 00	37
3,424 00							13,024 00	38
101,184 00							197,184 00	39
97,771 52				148,800 00	107,138 40	699,389 60	1,053,099 52	40
12,800 00							12,800 00	41
18,544 00							18,544 00	42
64,000 00	92,672 00	208,896 00	31,334 40	91,279 60	414,618 00		902,800 00	43
173,440 00							173,440 00	44
91,200 00							91,200 00	45
244,224 00	556,864 00	250,982 40	116,889 60			8,948,809 47	11,189,641 47	46
1,851,029 30	1,041,974 39	1,163,385 09	744,929 16	512,313 50	1,554,705 24	10,318,009 38	46,360,062 60	

(a) Amount actually paid after deductions amounting to \$1,521 82 made in 1905-06 (being for refunds, &c.), being the total of \$146,490.84, previously reported, for which cheques had issued.

5 GEORGE V., A. 1915

STATEMENT showing subsidies voted for Railways as to which contracts

Subsidies Voted.		Number.	Railways.	July 1, 1883 to June 30, 1907.
Authority.	Amount.			\$ c.
	\$ c.		Brought forward.....	29,173,716 54
7-8 Ed. VII. c. 63	*	1	Maritime Coal and Railway Co.....	
7-8 " 63	*	2	St. Marys and Western Ontario Ry. Co.....	
7-8 " 63	*	3	North Shore Ry. Co., formerly Beersville Coal and Ry. Co.....	20,736 00
7-8 " 63	*	4	St. Maurice Valley Ry. Co.—Three Rivers to St. Maurice.....	
7-8 " 63	*	5	Grand Trunk Pacific Ry. Co.....	
6 " 43	*	6	Canadian Pacific Ry. Co., Teulon to Icelandic River.....	
7-8 " 63	*	7	Canadian Pacific Ry. Co., Moosejaw northwesterly.....	
7-8 " 63	*	8	Canadian and Gulf Terminal Ry. Co.....	
6-7 " 40	*	9	Liverpool and Milltown Ry. 5 miles.....	
7-8 " 63	*	10	Thessalon and Northern Ry. Co.....	
7-8 " 34	*	11	Vancouver and Lulu Island Ry. Co.....	
7-8 " 51	*	12	Quebec and Saguenay Ry. Co.....	
7-8 " 63	*	13	Canadian Pacific Ry., Winnipeg to Gimli.....	
9-10 " 51	*	14	Ha Ha Bay Railway Co., Q.....	
2 Geo. V 47	*	15	Northern New Brunswick and Seaboard Ry. Co., N.B.....	
3-4 " 46	*	16	Can. Northern Pacific Ry. Co., B.C.....	
2 " 9	*	17	Fredericton and Grand Lake Ry. Co., N.B.....	
2 " 48	*	18	Southampton Railway Co., N.B.....	
2 " 48	*	19	St. John and Quebec Railway Co., N.B.....	
2 " 7	*	20	Canadian Northern Alberta Ry. Co., Alta.....	
3-4 " 10	*	21	Central Ry. of Canada, Q.....	
2 " 48	*	22	Temiskaming and Northern Ont Ry. Co.....	
3-4 " 53	*	23	Lake Erie and Northern Ry. Co., Ont.....	
2 " 48	*	24	Can. Pac. Ry., Bridge at Outlook.....	
2 " 48	*	25	Can. Pac. Ry., Bridge at Edmonton.....	
3-4 " 46	*	26	Alberta Central Railway, Alta.....	
		Total.....		29,194,452 54
	186,500 annually			
37 Vic., ch. 14	for 20 years.....	27	Atlantic and Northwestern Railway.....	3,358,800 00
46 " 2	1,525,250 00	28	Canada Central Railway.....	1,525,250 00
47 " 8		29	Canadian, Pacific extension.....	1,500,000 00
48-9 " 58		Total.....		35,578,502 5

* Acts of Parliament, 60-61 Victoria, Cap. 4; 62-63 Victoria, Cap. 7; 63-64 Victoria, Cap. 8; 1 Edward VII, Cap. 7; and others subsequent to date, authorise \$3 200 per mile subsidy if the cost does not average more than \$15,000 per mile, if over that amount, a further sum of fifty per cent on so much of the average cost of the mileage subsidized as in excess, of \$15,000, per mile, such subsidy not exceeding in the whole the sum of \$6,400 per mile.

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have been entered into and payments made up to March 31, 1914—*Concluded.*

Payments.							Total March 31, 1914.	Number.
1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1,851,029 30	1,041,974 39	1,163,385 09	744,929 16	512,313 50	1,554,705 24	10,318,009 38	46,360,062 60	
	3,200 00						3,200 00	1
	67,344 00			365 00			67,709 00	2
	6,880 00						27,616 00	3
	112,640 00		60,480 00				173,120 00	4
	367,249 00	550,551 96	302,679 04				1,220,480 00	5
		30,800 00			81,200 00		112,000 00	6
		303,360 00		78,432 00		103,682 27	485,474 27	7
			144,803 84	65,249 75			210,053 59	8
			32,000 00				32,000 00	9
				6,112 00			6,112 00	10
				61,760 00			61,760 00	11
				104,992 00	27,641 60	116,167 68	248,801 28	12
				30,176 00	4,346 43		34,522 43	13
					148,148 20	66,919 28	215,067 48	14
					86,528 00	21,632 00	108,160 00	15
					2,705,378 00	2,520,281 00	5,225,659 00	16
					104,995 04		104,996 04	17
					48,442 88	32,837 12	81,280 00	18
					174,120 96	364,617 42	538,738 38	19
						2,832,024 00	2,832,024 00	20
						30,145 02	30,145 02	21
						2,134,080 00	2,134,080 00	22
						135,129 60	135,129 60	23
						115,000 00	115,000 00	24
						126,000 00	126,000 00	25
						119,712 00	119,712 00	26
1,851,029 30	1,599,287 39	2,048,097 05	1,284,892 04	859,400 25	4,935,507 35	19,036,236 77	60,808,902 69	
186,600 00	186,600 00						3,732,000 00	27
							1,525,250 00	28
							1,500,000 00	29
2,037,629 30	1,785,887 39	2,048,097 05	1,284,892 04	859,400 25	4,935,507 35	19,036,236 77	67,566,152 69	

† This amount does not include the subsidy of \$25 000,000 to the Canadian Pacific Railway, nor the amount \$660,683.08 expended on the Annapolis and Digby Railway, both of which are included in Capital Account, nor the annual payment of \$219,700 to the Provincial Government of Quebec, being interest at the rate of 5 per cent on the sum of \$2,394,000 up to 1905, granted by 47 Vict., cap. 8 (1884) and the annual payment of \$107,730, being interest at the rate of 4½ per cent since and including 1905 on the said sum of \$2,394,000 for the line between Ottawa and Quebec which sum was transferred to the Public Debt as a liability and is dealt with by the Finance Department. See Public Accounts, 1898-1914 and page 79. 1908.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 1, 1914.

PART II.

STATEMENTS

OF THE

DEPARTMENTAL SOLICITOR

For the Year 1913-1914.

I. Money Subsidy Agreements for the year ended March 31, 1914.

II. Documents, placed on record in the Office of the Departmental Solicitor during the fiscal year ended March 31, 1914, affecting the Canals of the Dominion and the Hudson Bay Railway, viz.:—

- (1) Contracts entered into during the year.
- (2) Leases of Water-power and Properties granted.
- (3) Leases to the Crown.
- (4) Property conveyed to the Crown and lands conveyed by the Crown.
- (5) Damages released.

III. Documents, placed on record in the Office of the Departmental Solicitor during the nine months ended December 31, 1913, affecting the Intercolonial and Prince Edward Island Railways, viz.:—

- (1) Contracts entered into during the said nine months.
- (2) Leases of Properties granted.
- (3) Leases to the Crown.
- (4) Property conveyed to the Crown and lands conveyed by the Crown.
- (5) Damages released.

5 GEORGE V., A. 1915

SUBSIDY AGREEMENTS for the construction of Railways

Number of Contract.	Date of Signature.	Railway Company.	Line of Railway, or Work Subsidized.	Authority for Execution.	
				Act of Parliament.	Order in Council.
	1913.				1913.
(a) 20189	Aug. 8..	Alberta Central Ry. Co.	From Red Deer to Rocky Mountain House.	Can., 1913, e. 46.	July 1 ...
	1914.				
20577	Feb. 16..	Burrard Inlet Tunnel & Bridge Co.	Towards the construction of a bridge over the second Narrows of Burrard Inlet.	Can., 1913, e. 46.	Nov. 10....
	1913.				
20124	June 23..	The Canadian Northern Alberta Ry. Co.	From Edmonton, Alberta, to the boundary of the Province of British Columbia at or near the Yellowhead Pass.	Can., 1913, e. 10.	June 23....
20125	June 23..	The Canadian Northern Ontario Ry. Co.	From Ottawa to Port Arthur...	Can., 1913, e. 10.	June 23....
20126	June 23..	The Canadian Northern Ontario Ry. Co.	From Toronto to Ottawa.....	Can., 1913, e. 10.	June 23....
(b) 20190	Aug. 8..	The Canadian Pacific Ry. Co..	From Moosejaw, in a northwesterly direction.	Can., 1913, e. 46.	July 1....
20278	Sept. 27..	The Canadian Pacific Ry. Co.	From Gimli to a point on the Icelandic River at or near Riverton.	Can., 1913, e. 46.	Aug. 6 and Sept. 24....
	1914.				
20494	Jan. 8..	The Canadian Pacific Ry. Co.	Bridge over Saskatchewan River at Outlook, Sask.	Can., 1912, e. 48.	Nov. 29....
20507	Jan. 20..	Esquimalt & Nanaimo Ry. Co.	(b) From a point at or near McBride Jet. to or towards the village of Sandwich; (e) from village of Sandwich to Campbell River.	Can., 1912, e. 48.	Jan. 16, 1913, and Jan. 3, 1914. 1912.
	1913.				
(c) 19988	April 2..	The Kettle Valley Ry. Co.	From a point on the Company's line of railway near Coldwater to a point on the Fraser River.	Can., 1910, e. 51.	July 4....
(c) 20461	Dec. 15..	Kootenay Central Ry. Co.	From Golden via Windermere and Fort Steele to a point on the B. C. Southern Ry. at or near Jukeson.	Can., 1912, e. 48.	Oct. 19, 1912 and Mar. 3, 1913. 1913.
(d) 20462	Dec. 16..	The Kettle Valley Ry. Co.	From Merritt to Pentieton Wharf	Can., 1913, e. 46.	Nov. 27....
(e) 20463	Dec. 16..	The Kettle Valley Ry. Co.	From point on line between Merritt and Pentieton Wharf, about 25 miles south of Merritt, to a point on the Fraser River near Hope Station.	Can., 1913, e. 46.	Oct. 30 1914.
(f)					
	1914.				
(g) 20579	Feb. 18..	The Kettle Valley Ry. Co.	From point on the line between Merritt and Pentieton Wharf, at or near Pentieton, to Midway.	Can., 1913, e. 46.	Feb. 16....

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entered into during the Fiscal Year ended March 31, 1914.

Amount of Subsidy.		Number of miles Subsidized.	Maximum Grade Feet per Mile.	Radius of Curve - ture not less than.	Width of Clearing with side.	Width of Cutting.	Embankment.	Steel Rails, lbs. per lineal yard.	Date for Completion.
Per Mile.	Not exceeding								
\$	\$		Feet.	Feet.	Feet.	Feet.	Feet.	Lbs.	
3,200	6,400	70	42	1,433	50	20	15	56	April 4, 1916.
	350,000								Aug. 1, 1917.
12,000		260	52.80	573	50	20	15	80	May 4, 1915.
12,000		910	52.80	573	50	20	15	80	Aug. 1, 1915.
6,400		250	42.24*	717	50	20	15	56	Jan. 1, 1914.
3,200	6,400	123	52.80	1,433	50	20	14	56	Dec. 31, 1913.
3,200	6,400	30	21	2,865	50	20	14	56	Aug. 1, 1917.
	15% of cost not exceeding \$115,000.								Dec. 31, 1913.
3,200	6,400	45	71	717	50	18	14	56	Aug. 1, 1916.
3,200	6,400	38	52.80	955	50	18	14	56	Aug. 1, 1916.
3,200	6,400	50	116	410	50	18	14	56	Aug. 1, 1914.
3,200	6,400	175	32	573	50	20 18	14	56	Aug. 1, 1916.
3,200	6,400	145	132	410	50	18	14	56	Aug. 1, 1917.
3,200	6,400	55	116	410	50	18	14	56	Dec. 1, 1915.
3,200	6,400	135	52.80 116	478	50	20	15	56	Aug. 1, 1915.

5 GEORGE V., A. 1915

SUBSIDY AGREEMENTS for the Construction of Railways

Number of Contract.	Date of Signature.	Railway Company.	Line of Railway or Work Subsidized.	Authority for Execution.	
				Act of Parliament.	Order in Council.
	1913.				1913.
(h) 20411	Nov. 8..	The Lake Erie and Northern Ry. Co.	From Galt to Port Dover.....	Can., 1912, c. 48.	Nov. 1....
(i) 20151	July 5..	The Northern N.B. & Seaboard Ry. Co.	From Drummond Mines at Austin Brook to a point on the I. C. R. where it intersects the branch line from Bathurst Station to Bathurst Harbour.	Can., 1913, c. 46.	June 26....
(j) 20180 (k)	Aug. 1..	The Saint John and Quebec Ry. Co.	From Andover, N.B., to St. John, exclusive of 2 railway bridges.	Can., 1913, c. 46.	July 7....
(l) 20188 (m)	Aug. 8..	Tilsonburg, Lake Erie & Pacific Ry. Co.	From Ingersoll north to a junction with the St. Mary's and Western Ontario Railway at Embro.	Can., 1913, c. 46.	July 1....
(n) 20243	Aug. 25..	Tobique & Campbellton Ry. Co.	From Plaster Rock a'long the Tobique River to R. ley Brook.	Can., 1913, c. 46.	July 19....

(a) Supersedes No. 18559.

(b) Supersedes No. 17479.

(c) Supersedes No. 18975.

(d) Varied by Supplemental Agreement No. 20522.

(e) Supersedes No. 19088.

(f) Varied by Supplemental Agreement No. 20523.

(g) Varied by Supplemental Agreement No. 20530.

(h) Varied by Supplemental Agreement No. 20459.

SESSIONAL PAPER No. 20

entered into during the Fiscal Year ended March 31, 1914—*Concluded.*

Amount of Subsidy.		Number of Miles subsidized.	Maximum Grade, Feet per mile.	Radius of Curvature not less than	Width of Clearing each side.	Width of Cutting.	Embankment.	Steel Rails, lbs. per lineal yard.	Date for Completion.
Per Mile.	Not exceeding								
\$	\$		Feet.	Feet.	Feet.	Feet.	Feet.	Lbs.	
3,200	6,400	58	69	637	50	20	15	56	May 18, 1916.
3,200	6,400	16.9	80	717	50	20	15	56	Aug. 1, 1913.
3,200	6,400	200	53	818	49½	20	16	80	Nov. 1, 1915.
3,200	6,400	10.38	52.80	1,433	50	20	15	56	Dec. 31, 1913.
3,200	6,400	28	80	819	50	20	15	56	Aug. 1, 1917.

(i) Supersedes No. 19577.

(j) Supersedes No. 19705.

(k) Varied by Supplemental Agreement No. 20202.

(l) Supersedes No. 16631.

(m) Modified by endorsement to permit of the use of good, serviceable, used rails.

(n) Supersedes No. 18080.

(o) Superseded by No. 20463.

* Modified by endorsement.

E. E. FAIRWEATHER,
Acting Departmental Solicitor

5 GEORGE V., A. 1915

CONTRACTS entered into during the Fiscal Year ended March 31, 1914.

BEAUHARNOIS CANAL.

Number of Contract.	Date of Signature.	Contractors.	Description.
	1913.		
20237	Aug. 20.	Cossette and Company.....	Execute and complete certain works for protection of Government Dam at Valleyfield.

CHAMBLY CANAL.

	1913.		
20275	Sept. 26.	The Hamilton Bridge Works Co., Ltd.	Erection of a steel swing bridge over Canal at Larocque's Crossing.

CORNWALL CANAL.

	1913.		
20024	May 1.	Canada Cement Co., Ltd.....	Delivery of 2,000 bbls. of cement at Cornwall, Ont.
20488	Dec. 31.	The Kennedy Construction Co., Ltd.	Improving of Lower Entrance to Lock No. 20.

FARRAN'S POINT CANAL.

	1913.		
20024	May 1.	Canada Cement Co., Ltd.....	700 bbls. of cement at Aultsville, Ont.

GALOPS CANAL.

	1913.		
20024	May 1.	Canada Cement Co., Ltd.....	200 bbls. of cement at Iroquois, Ont.
20487	Dec. 31.	The Dickson Bridge Works Co., Ltd.	Erection of a swing bridge over Lock No. 28.

LACHINE CANAL.

	1913.		
19958	April 1.	Quinlan, Robertson & Miller.....	Construct concrete slopes and vertical walls at Cote St. Paul.
20023	May 1.	Canada Cement Co., Ltd.....	20,000 bbls. of cement for Quebec-St. Lawrence Canals.
20032	May 12.	Quinlan & Robertson.....	Removal of a ramp leading from property leased to Inland Navigation Co., Ltd., on Basin No. 1, through an opening in the flood protection wall, to Common Street.

SESSIONAL PAPER No. 20

CONTRACTS entered into during the Fiscal Year ended March 31, 1914.—*Continued.*LACHINE CANAL.—*Continued.*

Number of Contract.	Date of Signature.	Contractors.	Description.
	1913.		
20033	May 12..	J. A. Major & Co.....	To remove burned debris from off site of Shed No. 1, St. Gabriel Basin.
20049	May 26..	Quinlan, Robertson & Miller.....	Improvements to upper approach at Lock No.4, Cote St. Paul, and filling of gaps in wall near Brewster's Bridge.
20194	Aug. 6..	Canadian Bridge Co., Ltd.....	Supply and erect steel work for a freight shed, to be built on west side of St. Gabriel Basin No. 1.
20273	Sept. 24..	K. A. Morrison.....	Construction of a concrete foundation and piers for St. Gabriel Shed No. 1, Montreal, and laying of concrete floor in said shed.
20467	Dec. 20..	J. A. Major & Co.....	To remove portion of Shed No. 1, St. Gabriel Basin, which was partially destroyed by fire.
	1914.		
20627	Mar. 18..	Westmount Plumbing & Heating Co., Ltd.	Roofing of St. Gabriel Shed No. 1, Ottawa Street, Montreal.

RIDEAU CANAL.

	1913.		
20022	May 1..	Canada Cement Co., Ltd.....	Delivery of 2,000 bbls. of cement.
	1914.		
20600	Mar. 6..	John O'Toole.....	Construction of a concrete dam across the Rideau River in village of Merrickville, Ont.
20622	Mar. 6..	Canadian Western Lumber Co., Ltd.	Delivery of pieces of Douglas fir timber and pine plank for stop logs and their carriages at dam works at Merrickville, Ont.
20671	Mar. 28..	Canada Cement Co., Ltd.....	Delivery of 5,250 bbls. of cement.

RAPIDE PLAT CANAL.

	1913.		
20024	May 1..	Canada Cement Co., Ltd.....	Delivery of 150 bbls. of cement at Morrisburg, Ont.

SAULT STE. MARIE CANAL.

	1913.		
20025	May 1..	Canada Cement Co., Ltd.....	Delivery of 1,200 bbls. of cement.

SOULANGES CANAL.

	1913.		
20274	Sept. 26..	Quinlan & Robertson.....	Rebuilding Head of Guard Pier at lower entrance.
	1914.		
20623	Mar. 12..	The Phoenix Bridge & Iron Works, Ltd.	Erection of a rolling deck steel bridge over entrance to Basin No. 1 at Cascades Point, Que.
20652	Mar. 26..	Dominion Bridge Co., Ltd.....	Delivery of 8 stop logs, SL-1, and 8 stop logs, SL-2.

5 GEORGE V., A. 1915

CONTRACTS entered into during the Fiscal Year ended March 31, 1914.—*Continued.*

STE. ANNE'S LOCK.

Number of Contract.	Date of Signature.	Contractors.	Description.
	1913.		
20299	Oct. 28.	Montreal General Contracting Co., Ltd.	Renewal of the head pier of the Ste. Anne's lock.

TRENT CANAL.

	1913.		
20021	May 1.	Canada Cement Co., Ltd.	Delivery of 81,000 bbls. of cement.
20118	June 12.	W. R. McPhee & P. J. Kehoe.	Construct concrete dam at Fenelon Falls, Ont.
20186	Aug. 8.	Roger Miller & Sons, Ltd.	Manufacture, delivery and erection of 32 pairs of lock gates for Ontario-Rice Lake Division, and manufacture of 8 pairs of spare lock gates.
20242	Sept. 2.	M. Beatty & Sons, Ltd.	Manufacture, etc., of a steel pontoon lock gate lifter.
20276	Sept. 24.	The York Construction Co., Ltd.	Construction of the Port Severn Section of the Severn Division of the Canal.

WELLAND CANAL.

20026	May 1.	Canada Cement Co., Ltd.	Delivery of 6,300 bbls. of cement.
20050	May 26.	The Atlantic Lumber Co.	Delivery of timber, lumber, etc., for the year ending March 31, 1914.
20154	July 2.	J. H. Kratz & Co.	Delivery of timber, lumber, etc., for the year ending March 31, 1914.
20181	Aug. 1.	The Dominion Dredging Co., Ltd.	Construction of Section No. 1 of the Welland Ship Canal.
20185	" 6.	Jas. Battle & N. W. Gowan.	Manufacture, supply and delivery of 20 steel castings, forming Gowan Safety Appliance for Lock Gates.
20268	July 30.	R. H. Nelson.	Construct reinforced concrete syphon culvert under Dunnville Branch of Canal Feeder at Broad Creek, near Stromness.
20279	Oct. 1.	The Hamilton Bridge Works Co., Ltd.	Erection of a double track railway swing bridge over present Welland Canal below Lock No. 11.
20284	" 4.	O'Brien & Doheny and Quinlan & Robertson.	Construction of Section No. 3, Welland Ship Canal.
20460	Dec. 22.	Canadian Dredging Co., Ltd.	Construction of Section No. 5, Welland Ship Canal.
20486	" 31.	Baldry, Yerburch & Hutchinson, Ltd.	Construction of Section No. 2, Welland Ship Canal.
	1914.		
20604	Mar. 6.	F. H. Hopkins & Co.	Delivery of an "Industrial Works" locomotive crane of 50 tons capacity.

HUDSON BAY RAILWAY.

	1913.		
19992	April 1.	Sellers Anchor Bottom Tie Plate Co. of Canada, Ltd.	Deliver 140,000 tie plates for 80-lb. steel rails.
20013	" 29.	Polson Iron Works, Ltd.	Delivery of a 24-in. suction dredge.
20046	May 20.	Thor. Iron Works, Ltd.	Delivery of one steel tow barge and two steel sectional scows.

SESSIONAL PAPER No. 20

CONTRACTS entered into during the Fiscal Year ended March 31, 1914.—*Continued.*HUDSON BAY RAILWAY.—*Continued.*

Number of Contract.	Date of Signature.	Contractors.	Description.
	1913.		
20063	May 30..	F. H. Hopkins & Co.....	Delivery of machinery for 1½ cu. yd. dredge.
20064	" 30..	" "	Delivery of machinery for 3 cu. yd. dredge.
20065	" 30..	The Atlantic Lumber Co., Ltd....	Delivery of 54,000 ft. B.M. of white oak.
20101	June 7..	Jno. Reid & Co.....	For the delivery of a steel tug No. 80 (after certain alterations have been made) at St. Johns, Nfld., or Sydney, C.B.
20114	" 10..	The Long-Bell Lumber Co.....	Supply and delivery at Port Arthur, Texas, of 3,132,987 F.B.M. long leaf yellow pine.
20115	" 21..	Musgrave & Co.....	Delivery of lumber, timber, etc., for the terminus at Port Nelson.
20130	July 2..	" "	Supply and delivery of timber and round piling.
20150	" 2..	Montreal Locomotive Works, Ltd.	Delivery of two 9-in. x 14-in. cylinder, 36-in. gauge saddle tank locomotive.
20152	" 2..	F. H. Hopkins & Co.....	Delivery of ten 15-ton flat cars and six 15-ton No. 2 Russel logging cars.
20153	" 2..	Lecky & Collis, Ltd.....	Delivery of one No. 11 cube concrete mixer.
20160	" 12..	The Marconi Wireless Telegraph Co. of Canada, Ltd.	Supply of steel masts and other materials for construction, etc., of a radiotelegraph station at Hudson Bay terminus; and supply of skilled labour.
20173	" 12..	Mussens Limited.....	Supply of one steel pile hammer.
20174	" 12..	" "	Delivery of one Vulcan 6-in. x 10-in. C.O.S. class four driver saddle tank locomotive.
20175	" 12..	" "	Delivery of 30 wood frame side dump cars.
20176	" 12..	" "	Delivery of 330 gross tons of 30-lb. standard A.S.C.E. steel rails; 4,000 prs. fish plates; 16,000 track bolts and nuts; 24,000 pounds spikes.
20179	Aug. 1..	Polson Iron Works, Ltd.....	Delivery, f.o.b. cars, Montreal, hull and machinery of a stern wheel tug.
20184	" 6..	The Marconi Wireless Telegraph Co. of Canada, Ltd.	Erection, equipment and completion of a radiotelegraph station at Le Pas, Man.
20246	Sept. 4..	Coyle & Hughes.....	Erection of a wireless telegraph operating house at Le Pas, Man.
	1914.		
20556	Jan. 30..	Polson Iron Works, Ltd.....	Delivery of 3 steel steam lighters.

QUEBEC BRIDGE.

	1913.		
20129	July 2..	Michael P. Davis.....	Repairing of midstream pier of Chaudiere Bridge, situated ¼ mile south of south abutment of the Quebec Bridge on short connecting line of railway between Quebec Bridge and I.C. Ry.

E. E. FAIRWEATHER,

Acting Departmental Solicitor.

5 GEORGE V., A. 1915

WATER POWER and other Public Property leased by the Department of

CARILLON

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
	1913.		
20295	Oct 21	The Ottawa Transportation Co., Ltd.	Privilege to erect and maintain a cattle shed on dock on N.E. bank of Canal, Carillon, Ont.

CHAMBLY

20001	April 15	J. L. Langelier.....	Privilege to lay and maintain two electrical cables from St. Johns, Que., across Canal to Lessee's grist mill on west side of Canal.
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CORNWALL

20134	June 21	The Richelieu & Ontario Navigation Co.	Land on South side of Water Street, Cornwall, Ont.
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FARRAN'S

20416	Nov. 12	C. W. Farran.....	Land at Farran's Point, Co. Stormont.
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GALOPS

	1914.		
20588	Feb. 18	Hydro-Electric Power Commission of Ontario	Privilege to erect and maintain poles and to build and maintain transmission line on lands of Canals.
20629	Mar. 12	Hydro-Electric Power Commission of Ontario	Privilege to erect and maintain poles and to build and maintain portions of proposed 22,000 volt transmission line on Canal lands.

LACHINE

	1913.		
a20002	April 15	Lionel Ledue.....	Land on north wharf of Basin No. 2, Ste. Anne's Ward, Montreal.
20006	" 23	Canadian Rolling Mills Co., Ltd.	Privilege to lay and maintain a 10-in. water supply pipe across Canal lands from Canal to Lessee's plant on Cad. Lot No. 3607, Par. of Montreal, Que., and draw water.
b20009	" 23	The G.T.Ry. Co. of Canada.	Privilege to lay, maintain and operate a siding on north bank of Canal from main line into premises of Dominion Flour Mills Co., Ltd., on Cad. Lot No. 3412, Par. of Montreal; together with right and privilege of making a slight shifting southward of Lessee's main track.
20011	" 23	The Montreal Light, Heat & Power Co.	Privilege to lay and maintain, across Canal lands, a 24-in. supply pipe and a 36-in. discharge pipe at a point 150 ft. west of boundary stone No. 49, Par. of Montreal; and draw water.
20015	" 30	Arsene A. Larocque.....	Wharf lot at upper end of Wellington Basin, Montreal.
d20016	May 2	Dupuis & Poirier.....	Land on south side of Canal above Cote St. Paul Bridge, Montreal.
20040	" 13	Capt. A. Mallette.....	Land between Flour Basins Nos. 1 and 2, Montreal.
20041	" 15	Quinlan & Robertson...	Land on south side of Canal.
e20042	" 15	R. H. Miner & Co., Ltd.	Land fronting on St. Gabriel Basin No. 4, Montreal.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1914.

CANAL.

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First instal- ment due.
.....	During pleasure.....	Oct. 1, 1913.	1 00	Oct. 1....	Oct. 1, 1913.

CANAL.

.....	"	April 1, 1913.	1 00	April 1....	April 1, 1913.
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CANAL.

980 sq. ft.....	6 years, 2 months.....	June 1, 1913.	24 00	June 1....	June 1, 1913.
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POINT CANAL.

0.024 acres.....	During pleasure.....	Nov. 1, 1913.	1 00	Nov. 1....	Nov. 1, 1913.
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CANAL.

.....	During pleasure.....	Jan. 1, 1914.	10 00	Jan. 1....	Jan. 1, 1914.
.....	"	" 1, 1914.	10 00	Jan. 1....	" 1, 1914.

CANAL.

300 sq. ft.....	During pleasure.....	May 1, 1913.	12 00	May 1....	May 1, 1913.
.....	"	April 1, 1913.	550 00	April 1....	April 1, 1913.
.....	"	Feb. 1, 1913.	135 00	Feb. 1....	Feb. 1, 1913.
.....	"	April 1, 1913.	1,500 00	April 1....	April 1, 1913.
22,700 sq. ft.....	"	May 1, 1913.	1,816 00	May 1....	May 1, 1913.
22,767 sq. ft.....	"	" 1, 1913.	918 68	" 1....	" 1, 1913.
928 sq. ft.....	"	" 1, 1913.	74 25	" 1....	" 1, 1913.
4,500 sq. ft.....	"	" 1, 1913.	180 00	" 1....	" 1, 1913.
5,875 sq. ft.....	"	" 1, 1913.	800 00	" 1....	" 1, 1913.

5 GEORGE V., A. 1915

WATER POWER and other Public Property leased by the Department of
LACHINE

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
	1913		
f20043 o20052	May 15	R. H. Miner & Co., Ltd.	Land fronting on St. Gabriel Basin No. 1, Montreal.
	" 27	Canadian Sand & Gravel Co., Ltd.	Land on St. Gabriel Basin No. 4, Ste. Anne's Ward, Montreal.
h20053	" 20	Hugh F. Cumming.....	Land fronting on St. Gabriel Basin No. 1, Montreal.
i20070	June 2	Jean B. Bonhomme.....	Land on south side of Canal, Montreal.
j20071	May 28	The Grier Timber Co., Ltd.	Land west of new St. Gabriel Basin No. 4, Ste. Anne's Ward, Montreal.
k20072	" 30	Janvier Laberge.....	Land on south side of Canal, Montreal.
20110	June 6	City of Lachine.....	Land immediately west of Canal supply weir.
20111	" 9	The Montreal Light, Heat & Power Co....	Privilege to erect and maintain a coal elevating plant on south bank of Canal opposite N.E. $\frac{1}{2}$ of Lot No. 1021, Parish of Montreal.
l20135	" 21	James Henry Redfern...	Land on north bank of Canal below Atwater Avenue bridge, Montreal.
20158	July 2	The Canadian Bag Co., Ltd.	Land on south side of Canal, Montreal.
20159	" 2	The Imperial Oil Co., Ltd.	Privilege to lay and maintain 3-in. iron pipe across south bank of Canal at Cote St. Paul.
20161	" 9	The G. T. Railway Co. of Canada.	Privilege to lay, maintain and operate a single railway track on north bank of Canal, making connection with siding into premises of A. Bremner, Limited.
20162	July 9	The G. T. Ry. Co. of Canada.	Privilege to lay, maintain and operate a siding on Canal lands on north side of Canal from Lessee's present tracks for shunting cars of Canadian Car & Foundry Co.
20191	Aug. 6	C. P. Ry. Co.....	Privilege to lay, maintain and operate 2 sidings on south bank of Canal.
20235	Aug. 14	Dupuis & Poirier.....	Land on south bank of Canal above Cote St. Paul Bridge....
20236	Aug. 19	The James Shearer Co., Ltd.	Land on south bank of Canal west of St. Gabriel Lock.....
20261	Sept. 15	C. P. Ry. Co.....	Privilege to lay, maintain and operate a railway siding on south bank of Canal to premises of Canadian Wire Rope Co., Ltd.
20265	Sept. 18	The Steel Co. of Canada, Ltd.	Land on north bank of Canal.....
m20288	Oct. 6	The Jno. McDougall Caledonian Iron Wks. Co. Ltd.	Pt. Lot 1068, Ste. Anne's Ward, Montreal.....
	1908		
20291	Dec. 22	*Town of Emard.....	For passage of sewerage drains under Canal through tunnel opposite Davidson Street in Town of Emard.
	1913		
20292	Oct. 4	A. Leclaire.....	Land on south side of Canal below Lock No. 5, at Lachine, Que.
20297	Oct. 21	The G. T. Ry. Co. of Canada.	Privilege to lay, maintain and operate a railway track across Mill St., Montreal.
20402	Oct. 30	C. P. Ry. Co.....	Privilege to lay, maintain and operate a railway siding 210 feet long, on Canal lands, from branch on south side of Canal to premises of J. Elie.
20424	Nov. 27	The Canadian Light, Heat & Power Co., Ltd.	Privilege to lay and maintain an electric cable across Canal on west side of Cote St. Paul Bridge.
20425	Nov. 27	"	Privilege to lay and maintain a pipe line from Canal to Lessee's plant at Cote St. Paul Bridge; and draw water.
20477	Dec. 20	Consumers Cordage Co., Ltd.	Land on south side of Canal, St. Gabriel Ward, Montreal.....
20515	Dec. 29	The N. K. Fairbank Co., Ltd.	Land on south bank of Canal opposite Lessee's property in Ville La Salle.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1914.—*Continued.*CANAL.—*Continued.*

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual Rental.	Due each year.	First install- ment due.
			\$ cts.		
5,750 sq. ft.....	During pleasure.....	May 1, 1913.	1,400 00	May 1....	May 1, 1913.
19,046 sq. ft.....	".....	1, 1913.	1,701 00	1....	1, 1913.
3,000 sq. ft.....	".....	" 1, 1913.	240 00	" 1....	" 1, 1913.
5,750 sq. ft.....	".....	" 1, 1913.	115 00	" 1....	" 1, 1913.
32,670 sq. ft.....	".....	" 1, 1913.	2,600 00	" 1....	" 1, 1913.
5,411 sq. ft.....	".....	" 1, 1913.	86 00	" 1....	" 1, 1913.
69,898 sq. ft.....	".....	Sept. 1, 1913.	1 00	Sept. 1....	Sept. 1, 1913.
.....	".....	June 1, 1913.	36 00	June 1....	June 1, 1913.
1,950 sq. ft.....	".....	" 1, 1913.	78 00	" 1....	" 1, 1913.
839 sq. ft.....	21 years.....	May 1, 1913.	70 00	May 1....	" 1, 1913.
.....	During pleasure.....	June 1, 1913.	10 00	June 1....	June 1, 1913.
.....	".....	" 1, 1913.	140 00	" 1....	" 1, 1913.
.....	".....	Jan. 1, 1913.	10 00	Jan. 1....	Jan. 1, 1913.
.....	".....	July 1, 1913.	100 00	July 1....	July 1, 1913.
6,040 sq. ft.....	".....	Aug. 1, 1913	241 60	Aug. 1....	Aug. 1, 1913.
13,500 sq. ft.....	".....	July 19, 1913	540 00	July 19....	July 19, 1913.
.....	".....	Aug. 1, 1913.	34 50	Aug. 1....	Aug. 1, 1913.
1,500 sq. ft.....	".....	July 1, 1913.	60 00	July 1....	July 1, 1913.
7,600 sq. ft.....	".....	May 1, 1913.	300 00	May 1....	May 1, 1913.
.....	".....	Dec. 22, 1908.	1 00	Dec. 22....	Dec. 22, 1908.
6,000 sq. ft.....	".....	Oct. 1, 1913.	120 00	Oct. 1....	Oct. 1, 1913.
.....	".....	Aug. 1, 1913.	10 00	Aug. 1....	Aug. 1, 1913.
.....	".....	Oct. 1, 1913.	105 00	Oct. 1....	Oct. 1, 1913.
.....	".....	April 30, 1911.	10 00	April 30....	April 30, 1911.
.....	".....	June 6, 1911.	1,500 00	June 6....	June 6, 1911.
11,462 sq. ft.....	".....	Dec. 1, 1913.	458 48	Dec. 1....	Dec. 1, 1913.
560 sq. ft.....	".....	Oct. 1, 1913.	16 80	Oct. 1....	Oct. 1, 1913.

5 GEORGE V., A. 1915

WATER POWER and other Public Property leased by the Department of
LACHINE.

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
1914			
20524	Jan. 27	City of Montreal.....	Parcels of land known as Mill and Oak Streets, Montreal.....
20583	Feb. 12	The Montreal Light Heat & Power Co.	Privilege to pay and maintain gas mains under Canal and across Canal lands above Cote St. Paul.
20584	Feb. 16	Norman M. McLeod.....	Land on south side of Canal.....
20585	Feb. 18	C. P. Ry. Co.....	Privilege to lay, maintain and operate a railway siding, 235 feet long on Canal lands on north bank of Canal from main track to premises of Dominion Wire Rope Company.

RAPIDE PLAT

20588	Feb. 18	Hydro-Electrie Power Commission of Ontario.	Privilege to erect and maintain poles and build and maintain transmission line on Canal lands.
20629	Mar. 12	"	Privilege to erect and maintain poles and build and maintain portions of proposed 22,000 volt transmission line on Canal lands.

RIDEAU

1913			
19962	April 1	The Ottawa Northern & Western Ry. Co.	Land on north side of Canal, Ottawa, adjacent to right of way of Lessee and Dufferin Bridge.
19963	April 1	Town of Smith's Falls..	Land on north side of River Street.....
19990	April 16	The Bell Telephone Co. of Canada, Ltd.	Privilege to lay and maintain five 3½ in. pipes across Canal lands and under Canal on Lot "H," Con. "D," Tp. of Nepean, Co. of Carleton, Ont.
20010	April 28	G. L. Jakes.....	Land on south side of cut above Upper Lock at Merrickville Lock Station, and privilege to install and maintain a Bowser gasoline tank thereon.
20017	April 30	The Rideau Aquatic Club, Ltd.	Land covered by water; pt. Lot Letter "I." Con. Letter "C," Tp. of Nepean, Co. of Carleton, Ont.
20027	May 2	John Eligh.....	Land covered by the waters of the Canal, being a wharf site on Lot No. 6, Broken front Concession, Tp. of Marlborough, Co. of Carleton, Ont.
20028	May 2	John Randall.....	Land covered by the waters of the Canal, being a wharf site on Lot No. 3, Con. 8, Tp. of Leeds, Co. of Leeds, Ont.
20029	May 2	G. L. & W. B. Dickenson.	Land covered by the waters of the Canal, being a wharf site on Lot No. 8, Long Island, Tp. of Osgoode, Co. of Carleton, Ont.
20030	May 2	C. G. Lindsay.....	Land covered by the waters of the Canal, being a wharf site on Lot No. 25, Con. 1, Tp. of North Gower, Co. of Carleton, Ont.
20031	May 2	John P. Foley.....	Land covered by the waters of the Canal being a wharf site, on Lots Nos. 4, 5, 6 and 7, E. side Main St., Westport, Co. Leeds, Ont.
20037	May 2	J. R. Dargavel.....	Land covered by the waters of the Canal, being a wharf site on Lot No. 6, Con. 6, Tp. of South Crosby, Co. Leeds, Ont.
20038	May 15	Wm. E. Chester.....	Land on East side Rideau River at Clowes Lock Station, being part Lot 3, Con. "B," Tp. of Wolford, Co. of Grenville, Ont.
20104	June 6	J. R. Dargavel.....	Land at Chaffey's Lock Station, pt. Lot 17, Con. 8, Tp. of South Crosby, Co. Leeds.
20105	June 6	Thos. Kenney.....	Land covered by the waters of the Canal, being a wharf site on Lot 6, Con. 6, Tp. of South Crosby, Co. Leeds, Ont.
20109	June 6	H. B. Brownlee.....	Privilege to install and maintain a gasoline tank, pipe line and pump on Canal land near Detached Lock at Smith's Falls, Co. Lanark.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1914.—*Continued.*CANAL.—*Continued.*

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First instal- ment due.
			\$ ct4.		
	99 years.....	Jan. 1, 1914.	1 00	Jan. 1....	Jan. 1, 1914.
	During pleasure.....	Feb. 1, 1914.	50 00	Feb. 1....	Feb. 1, 1914.
3,750 sq. ft.....	".....	Jan. 1, 1914.	150 00	Jan. 1....	Jan. 1, 1914.
	".....	Oct. 1, 1913.	117 50	Oct. 1....	Oct. 1, 1913.

CANAL.

	During pleasure.....	Jan. 1, 1914.	10 00	Jan. 1....	Jan. 1, 1914.
	".....	" 1, 1914.	10 00	" 1....	" 1, 1914.

CANAL.

2,405 sq. ft.....	99 years.....	June 1, 1911.	1 00	June 1....	June 1, 1911.
3,870 sq. ft.....	During pleasure.....	April 1, 1913.	1 00	April 1....	April 1, 1913.
4,300 sq. ft.....	".....	" 1, 1913.	1 00	April 1....	April 1, 1913.
100 sq. ft.....	".....	" 1, 1913.	15 00	April 1....	April 1, 1913.
21,000 sq. ft.....	".....	" 1, 1913.	1 00	" 1....	" 1, 1913.
1,620 sq. ft.....	".....	" 1, 1913.	1 00	" 1....	" 1, 1913.
2,400 sq. ft.....	".....	April 1, 1913.	1 00	April 1....	April 1, 1913.
6,450 sq. ft.....	".....	" 1, 1913.	1 00	" 1....	" 1, 1913.
2,574 sq. ft.....	".....	" 1, 1913.	1 00	" 1....	" 1, 1913.
29,800 sq. ft.....	".....	" 1, 1913.	1 00	" 1....	" 1, 1913.
994 sq. ft.....	".....	" 1, 1913.	1 00	" 1....	" 1, 1913.
3 acres.....	".....	July 1, 1913.	5 00	July 1....	July 1, 1913.
4,750 sq. ft.....	13 years.....	June 1, 1913.	1 00	June 1....	June 1, 1913.
2,530 sq. ft.....	During pleasure.....	April 1, 1913.	1 00	April 1....	April 1, 1913.
	".....	May 1, 1913.	50 00	May 1....	May 1, 1913.

5 GEORGE V., A. 1915

WATER POWER and other Public Property leased by the Department of

RIDEAU

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
	1913		
20133	June 21	C. W. Hartley, Jno. Randall & A. Neal.	Land covered by the waters of the Canal, being a wharf site on Lock No. 4, Con. 8, Tp. of Leeds, Co. of Leeds, Ont.
20401	Nov. 5	C. W. Postlethwaite....	Pt. Lot 8, Con. "A," Tp. Wolford, Co. Grenville.....
	1914		
20501	Jan. 8	The Bell Telephone Co. of Canada, Ltd.	Privilege to erect and maintain telephone wires across Tay Branch of Canal about $\frac{1}{2}$ mile east of Perth.
o20530	Jan. 29	The Ottawa Transportation Co., Ltd.	Wharf Lots Nos. 1, 2, 3 and 4, west side Canal, Ottawa, Ont..

SAULT STE.

	1913		
20055	May 20	A. Bryan & W. Grier....	Part of St. Mary's Island, Sault Ste. Marie, Ont.....

TRENT

	1913		
19997	April 19	Wesley Munroe.....	Pt. Lot 1, Con. 4, Tp. of Carden, Co. Victoria.....
20068	May 6	Eastern Power Co., Ltd.	Privilege to lay and maintain a 4in. iron pipe across Canal lands at Healey Falls, pt. of Lot 16, Con. 11, Tp. of Seymour, Co. of Northumberland, Ont.
20069	June 2	Jno. H. Brandon.....	Land west of Colborne St., Fenelon Falls, Ont.....
20137	June 24	The Bell Telephone Co. of Canada, Ltd.	Privilege to erect and maintain a telephone line across Canal below Lock No. 2, Simcoe-Balsam Lake Division.
20164	July 12	The Fowlds Co., Ltd....	Privilege to erect and maintain a transmission line for electric lighting across Canal and its right of way, in village of Hastings, Co. of Northumberland, Ont.
20187	Aug. 8	Roger Miller & Sons, Ltd.	License to use 6 1-5 acres of land below Lock No. 1, in Town of Trenton, for purposes of Contract No. 20186.
20263	Sept. 15	The Randolph MacDon-ald Co., Ltd.	Land in Lots 31 and 32, Con. 8, Tp. of Fenelon, Co. of Victoria, Ont.
20277	Sept. 24	J. S. Osborne.....	Privilege to use and occupy all the reserve lands along the Holland River Division for pasturage purposes.
20465	Dec. 9	The Eastern Power Co., Ltd.	Privilege to lay and maintain a sewage disposal pipe across Canal land, pt. of Lot 16, Con. 11, Tp. of Seymour, Co. of Northumberland, Ont.
20476	Dec. 20	The Bell Telephone Co. of Canada, Ltd.; The North American Telegraph Co. and The G.N.W. Telegraph Co.	Privilege to erect and maintain a telephone and telegraph line across Canal and right of way in village of Hastings, Co. of Peterborough, Ont.
	1914		
20500	Jan. 8	Harvey Municipal Telephone System.	Privilege to lay and maintain a submarine telephone line across Canal at head of Upper entrance pier of the Buckhorn Lock.
20514	Jan. 19	James Waters.....	Bed of Trent River, east side, Campbellford, Co. of Northumberland, Ont.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1914.—*Continued.*CANAL.—*Continued.*

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First instal- ment due.
			\$ cts.		
17,033 sq. ft.....	During pleasure.....	April 1, 1913.	1 00	April 1....	April 1, 1913.
0-11 acres.....	"	Nov. 1, 1913.	2 00	Nov. 1....	Nov. 1, 1913.
.....	"	Dec. 1, 1913.	1 00	Dec. 1....	Dec. 1, 1913.
.....	"	Mar. 4, 1913.	250 00	Mar. 4....	Mar. 4, 1913.

MARIE CANAL.

0-28 acres.....	During pleasue.....	May 1, 1913	25_00	May 1....	May 1, 1913.
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CANAL.

7-5 acres.....	During pleasure.....	April 1, 1913.	7 50	April 1....	April 1, 1913.
.....	"	" 1, 1913.	1 00	April 1....	April 1, 1913.
0-47 acres.....	"	Jan. 1, 1913.	7 50	Jan. 1....	Jan. 1, 1913.
.....	"	May 1, 1913.	1 00	May 1....	May 1, 1913.
.....	"	July 1, 1913.	1 00	July 1....	July 1, 1913.
6-1-5 acres.....	"	Aug. 8, 1913.	1 00	Aug. 8....	Aug. 8, 1913.
0-9 acres.....	"	" 1, 1913.	2 00	" 1....	" 1, 1913.
.....	3 years.....	Sept. 20, 1913.	151 00	Sept. 20....	Sept. 20, 1913.
.....	During pleasure.....	Dec. 1, 1913.	1 00	Dec. 1....	Dec. 1, 1913.
.....	"	July 1, 1913.	1 00	July 1....	July 1, 1913.
.....	"	Dec. 1, 1913.	1 00	Dec. 1....	Dec. 1, 1913.
0-027 acres.....	"	" 1, 1913.	5 00	" 1....	" 1, 1913.

5 GEORGE V., A. 1915

WATER POWER and other Public Property leased by the Department of
WELLAND

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
1913			
19968	April 1	The Ontario Paper Co., Ltd.	Part of Lot No. 29, Tp. of Thorold, Co. of Welland, Ont., and privilege to construct a concrete dock 300 feet long, and to lay an 18-in. pipe and draw water from canal.
p20007	" 23	Plymouth Cordage Co.	Land in Town of Welland; part of Lot 26, Con. 6, Tp. of Crowland, Co. of Welland, Ont.
q20008	" 23	Town of Welland.....	Land in Town of Welland; part of Lot 26, Con. 6, Tp. of Crowland, Co. of Welland, Ont.
20039	May 13	Canada Interlake Line, Ltd.	Land in Town of Welland; part of Lot 26, Con. 6, Tp. of Crowland, Co. of Welland, Ont.
20051	" 26	Davy Pulp and Paper Co., Ltd.	Part of Lot 17, Thorold, Welland County, and privilege of drawing from canal above lock No. 25, 460 h.p. of surplus water.
20054	" 26	James Delaney.....	Part of Lot 15, Con. 5, Tp. of Grantham, Co. of Lincoln, Ont....
20061	" 26	The Wainnes and Root Gas Co., Ltd.	Privilege to lay and maintain a 6-in. gas pipe across canal lands and Government dam at Dunnville, Ont.
20074	" 30	John Laughlin.....	Part Lot 14, Con. 5, Tp. of Grantham, Co. of Lincoln, Ont....
20102	June 6	Geo. Luffman.....	Part of Lot No. 11, Con. 7, Tp. of Grantham, Co. of Lincoln, Ont.
20103	" 6	Jos. R. Heslop.....	Lot No. 15, Port Robinson, Ont.; and 15 h.p. of water.....
20136	" 21	Rachel Wills.....	Part Lot 15, Con. 5, Tp. of Grantham, Co. of Lincoln.....
20163	July 9	British Canadian Cann- ers, Ltd.	Privilege to lay, build and maintain an intake pipe and pump house from new canal at Port Robinson and draw water.
20195	Aug. 1	The St. Catharines Cold Storage and Forward- ing Co.	Part Lot 14, Con. 5, Tp. of Grantham, Co. of Lincoln, Ont....
20196	" 8	Hydro-Electric Power Commission of Ontario	The right and privilege to lay and maintain a submarine cable across new canal above lock No. 4, to be used in connection with 2,200 volt transmission line.
20204	" 12	British Canadian Cann- ers, Ltd.	Privilege to lay and maintain a 3-in. pipe and to erect a pump-house on canal lands at Port Dalhousie, Ont., and draw water.
20248	Sept. 8	The Dunnville Consoli- dated Telephone Co., Ltd.	Privilege to erect and maintain 3 telephone lines along canal ..
20262	" 18	Union Carbide Co. of Canada, Ltd.	Privilege to lay, maintain and operate a railway siding to connect works with present track in rear of Government dock south of Welland.
20264	" 17	Township of Crowland..	Privilege to lay and maintain a 12-in. sewer pipe on canal land, being the westerly end of a sewer to be laid on Ontario road, and to connect same with Government sewer.
20286	Oct. 7	Lincoln Clay Products Co., Ltd.	Privilege to lay and maintain a 1½-in. intake pipe across canal lands from hydraulic race near Lincoln avenue, St. Catharines; and draw 400 gallons of water per day.
20287	" 7	The Niagara, St. Catharines & Toronto Ry. Co.	The right and privilege to construct and maintain sidings to property of Interlake Tissue Mills at Merritton and to premises of Thorold Pulp Co. at Thorold.
20293	" 15	Metals Chemical Co., Ltd.	Privilege to lay and maintain a 3-in. intake pipe and a 2-in. discharge pipe across canal lands near Welland, Ont., and draw from 2,000 to 3,000 gallons of water per day from canal.
20418	Nov. 14	Geo. P. Brown.....	Land on north side of feeder between Canal St. West and Dunnville Lock, Dunnville, Ont.
20464	Dec. 5	The Welland Club, Ltd.	Land between State and Regent streets, Welland, Ont., part Lot 26, Con. 5, Tp. of Crowland, Co. of Welland, Ont.
1914.			
20513	Jan. 19	Union Carbide Co. of Canada, Ltd.	Privilege to lay and maintain a 20-in. intake pipe from canal to lessee's premises at Welland, Ont.; and draw 1,000,000 gallons water therethrough daily.
20516	" 19	Thos. G. Orme.....	Land on north side of feeder between Canal St. West and Dunnville Lock, Dunnville, Ont.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1914.—*Continued.*

CANAL.

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual Rental.	Due each year.	First instal- ment due.
			\$ cts.		
1.29 acres.....	During pleasure.....	Mar. 1, 1913.	415 00	Mar. 1....	Mar. 1, 1913.
1.54 acres.....	".....	June 1, 1913.	40 00	June 1....	June 1, 1913.
0.77 acres.....	".....	April 1, 1913.	10 00	April 1....	April 1, 1913.
0.75 acres.....	".....	" 1, 1913.	100 00	" 1....	" 1, 1913.
.....	21 years renewable....	" 1, 1913.	Land 10 00 W.P. 2760 00	" 1....	" 1, 1913.
1.68 acres.....	During pleasure.....	" 1, 1913.	6 72	" 1....	" 1, 1913.
.....	".....	Jan. 1, 1913.	25 00	Jan. 1....	Jan. 1, 1913.
0.06 acres.....	".....	April 1, 1913.	1 00	April 1....	April 1, 1913.
12.60 acres.....	".....	" 1, 1913.	50 40	" 1....	" 1, 1913.
0.33 acres.....	21 years renewable....	July 1, 1913.	116 00	July 1....	July 1, 1913.
0.07 acres.....	During pleasure.....	April 1, 1913.	1 00	April 1....	April 1, 1913.
.....	".....	June 1, 1913.	50 00	June 1....	June 1, 1913.
0.04 acre.....	".....	April 1, 1913.	1 00	April 1....	April 1, 1913.
.....	".....	Aug. 1, 1913.	1 00	Aug. 1....	Aug. 1, 1913.
.....	".....	June 1, 1913.	55 00	June 1....	June 1, 1913.
.....	".....	Aug. 1, 1911.	25 00	Aug. 1....	Aug. 1, 1911.
.....	".....	Sept. 1, 1913.	25 00	Sept. 1....	Sept. 1, 1913.
.....	".....	" 1, 1913.	5 00	" 1....	" 1, 1913.
.....	".....	Oct. 1, 1913.	15 00	Oct. 1....	Oct. 1, 1913.
.....	".....	Aug. 1, 1913.	25 00	Aug. 1....	Aug. 1, 1913.
.....	".....	Oct. 1, 1913.	25 00	Oct. 1....	Oct. 1, 1913.
.....	".....	Nov. 1, 1913.	10 00	Nov. 1....	Nov. 1, 1913.
0.48 acre.....	".....	" 1, 1913.	15 00	" 1....	" 1, 1913.
.....	".....	Dec. 1, 1913.	325 00	Dec. 1....	Dec. 1, 1913.
0.01 acre.....	".....	Jan. 1, 1914.	10 00	Jan. 1....	Jan. 1, 1914.

5 GEORGE V., A. 1915

WATER POWER and other Public Property leased by the Department of
WELLAND

No. of Lease.	Date of Signature.	Lessec.	Lands or rights demised.
	1913		
20518	Jan. 20	David P. Fry.....	Land on north side of feeder between Canal St. West and Dunnville Lock, Dunnville, Ont.
20571	Feb. 7	The Niagara, St. Catharines & Toronto Ry. Co.	Privilege to lay and maintain a 12,000 volt submarine transmission cable across canal at Berryman ave., St. Catharines, Ont.; together with privilege to erect and maintain a transmission pole line.
20617	Mar. 6	Lincoln Electric Light & Power Co., Ltd.	Privilege to lay and maintain a 3-wire submarine cable across canal near Weschester ave., St. Catharines, Ont., etc.
20621	" 12	The Niagara, St. Catharines & Toronto Ry. Co.	Privilege to erect and maintain a 75-ft. trestle over Welland hydraulic raceway at Welland, Ont.; and lay, maintain and operate a railway siding over trestle and on canal lands.
20637	" 17	The Provincial Natural Gas Co., Ltd.	Privilege to lay and maintain a 5½-in. natural gas pipe, along east side of canal from Sixth street in town of Welland to the plant of Electro-Metals, Ltd.
20649	" 25	Thomas B. Stern.....	Land on north side of canal feeder west of lock; part of Lot 27, Con. 7, Tp. of Crowland, Co. of Welland, Ont.

a Supersedes No. 18955; surrendered.

b Cancels and supersedes No. 19266.

c Modifies No. 15518.

d Cancels and supersedes No. 17699.

e Supersedes No. 17264.

f Supersedes Nos. 17059 and 17958.

g Supersedes No. 17001.

h Supersedes No. 17086.

i Cancels No. 19349.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1914.—*Concluded.*CANAL.—*Continued.*

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual Rental.	Due each year.	First instal- ment due.
			\$ cts.		
0.012 acre.....	During pleasure.....	Jan. 1, 1914.	10 00	Jan. 1....	Jan. 1, 1914.
.....	"	Dec. 1, 1913.	25 00	Dec. 1....	Dec. 1, 1913.
.....	"	Feb. 1, 1914.	10 00	Feb. 1....	Feb. 1, 1914.
.....	"	Mar. 1, 1914.	20 00	Mar. 1....	Mar. 1, 1914.
.....	"	April 1, 1914.	5 00	April 1....	April 1, 1914.
.....	"	Mar. 1, 1914.	15 00	Mar. 1....	Mar. 1, 1914.

j Supersedes No. 17091.*k* Cancels No. 16529.*l* Cancelled by Notice No. 20797.*m* Supersedes No. 15556.*n* Extended by endorsement to include wharf site, 18,888 sq. ft. in extent.*o* Supersedes No. 12383.*p* Cancels and supersedes No. 17271.*q* Cancels and supersedes No. 19183.

E. E. FAIRWEATHER,
Acting Departmental Solicitor.

5 GEORGE V., A. 1915

PROPERTY leased to the Department of Railways and Canals by various

LACHINE

No. of Lease.	Date of Signature.	Lessor.	Property or rights demised.
	1913.		
20073	May 27	Joseph McLaughlin.....	Numbers 26 and 28, Riverside Drive, Lachine Locks, Que., (double tenement house to be used by the statistical office at Lachine).

RIDEAU

20012	April 23	The W. H. Kelly Lum- ber Co.	Lot 8, Range 1, Tp. of Buckingham, Que.
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TRENT

	1914.		
20674	Mar. 28	Bradburns, Limited.....	Four rooms fronting on George street over stores Nos. 336 to 342, Peterborough, Ont.

SESSIONAL PAPER No. 20

parties during the Fiscal Year ended March 31, 1914.

CANAL.

Term.	Commence- ment of term.	TERMS OF PAYMENT.		
		Annual Rental.	Due each year.	First instal- ment due.
3 years.....	May 1, 1913.	\$ cts. 500 00	Monthly....	June 1, 1913.

CANAL.

From date of lease until boom dredge, being constructed under contract No. 19674, is completed and delivered.	April 23, 1913.	1 00 For whole period of occupancy.	April 23, 1913.
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CANAL.

1 year.....	Mar. 1, 1914.	450 00	Quarterly...	Mar. 1, 1914.
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E. E. FAIRWEATHER,
Acting Departmental Solicitor.

5 GEORGE V., A. 1915

PROPERTY conveyed to the Department of Railways and Canals

GALOPS

Number of Deed.	Date of Deed.	Grantor.	Lot.
1913			
20215	May 26	Win. Geo. Robinson <i>et al.</i>	Part of the W. $\frac{1}{2}$ of Lot 30, Con. 1.....
LACHINE			
20085	April 3	The Canadian Carbonate Co., Ltd.	Land at Cote St. Paul.....
RAPIDE PLAT			
20407	Sept. 15	Thos. Mullin <i>et ux.</i>	Part of the East $\frac{1}{2}$ of the W. $\frac{1}{2}$ of Lot 5, Con. 1.....
ST PETER'S			
1912			
*19730	Oct. 29	Robt. C. Morrison <i>et ux.</i>	Land covered with water on north shore of St. Peter's Bay and west of entrance to canal.
TRENT			
1913			
20088	April 7	Effa J. Irwin <i>et al.</i> ...	Parts of Lots 21 and 22 in Water or East River block on west side of Front street.
20089	April 21	Fred. W. Wood <i>et ux.</i> ...	Part of Lot 19 in Water or East River block.....
20090	April 23	Alex. T. Green.....	Parts of Lots 13 and 14 in Water or East River block....
20091	May 16	Chas. Dunk <i>et ux.</i>	Parts of Lot 18 in Water block.....
20219	June 21	Henry R. Daniel.....	Parts of Lots Nos. 31 and 32, Con. 8, and part of Lot 31, Con. 9.
20220	June 25	Michael O'Donoghue <i>et ux.</i>	Land and land covered by waters of river Trent, part of Lot No. 15 in South block on north side of Front Street; and parts of Lot No. 11, Con. 7.
20232	May 23	Jno. B. Ferris <i>et ux.</i> ...	Part of South $\frac{1}{2}$ of Lot No. 9, Con. 5 and privilege to flood said lands.
20433	Sept. 4	Thos. J. Horkins <i>et ux.</i>	Parts of the North $\frac{1}{2}$ and South $\frac{1}{2}$ of Lot 8, Con. 4.....
1914			
20550	Jan. 3	Thos. J. Barrie <i>et ux.</i> ...	Parts of Lots 15 and 16 in Water or East River block...
1913			
20553	Dec. 22	Andrew Haig <i>et ux.</i>	Land and land covered by waters of river Trent.....
1914			
20713	Feb. 9	Trustees, Baptist Church, Campbellford.	Land in.....
1911			
*20783	Nov. 1	James Thompson.....	Parts of Lots Nos. 6, 7, 8, 9, 10, 11 and 12 in South block and part of Lot 11, Con. 7.

SESSIONAL PAPER No. 20

during the Fiscal Year ended March 31, 1914.

CANAL.

District.	County.	Area.	Amount.
			\$ cts.
Matilda.....	Dundas, Ont.....	0.01 acre.....	25 00

CANAL.

Montreal.....	Jacques Cartier.....	21,565 sq. ft.	60,000 00
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CANAL.

Matilda.....	Dundas.....	0.021 acres.....	100 00
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CANAL.

Lennox.....	Richmond.....	3.75 acres.....	1,100 00
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CANAL.

Campbellford.....	Northumberland, Ont.....	0.48 acre.....	1,770 00
"	"	0.14 acres.....	2,025 00
"	"	0.023 acre.....	1 00
"	"	0.1 acre.....	and exchange of land 2,250 00
Fenelon.....	Victoria.....	0.03 acre.....	
		48.6 acres.....	1,500 00
Campbellford.....	Northumberland, Ont.....	0.64 acre.....	500 00
Seymour.....	"		
"	"	1.56 acres.....	150 00
"	"	2.48 acres.....	250 00
Campbellford.....	"	0.21 acre.....	1,725 00
		0.05 acre.....	
"	"	0.047 acre.....	400 00
"	"	0.1 acre.....	200 00
"	"	1.58 acres.....	427 00

5 GEORGE V., A. 1915

PROPERTY conveyed to the Department of Railways and Canals

WELLAND

Number of Deed.	Date of Deed.	Grantor.	Lot.
1913			
20408	Sept. 23	Andrew Miller <i>et ux.</i>	Lot 22, west side of Wellington street.
20431	Oct. 21	Martin Cloy <i>et ux.</i>	Lot 30 on east side of Chapel St., and parts of Lots 26 and 27 on west side of Wellington St.
20432	Nov. 11	Cecelia Battle <i>et al.</i>	Lot No. 22, east side of Chapel St.
20438	Oct. 21	Jno. Fisher <i>et ux.</i>	Lots Nos. 10, 11 and 12 on west side of Wellington Street.
20439	Oct. 21	Julia Stewart	Lots 25 and 26 on the east side of Chapel St.
20440	Oct. 21	Winnifred C. Calcott.	Lots Nos. 28 and 29 on east side of Chapel street.
20441	Oct. 9	Margaret Clark	Lot No. 84 east side of Chapel street.
20442	Oct. 21	Mary L. Calcott.	Lot No. 27 east side of Chapel street.
20443	Oct. 21	Nelly Orr Peterson.	Lots Nos. 24 and 25, west side of Wellington street.
20444	Oct. 21	Jane and Martha Allison.	Lot 18 on west side of Wellington Street and parts of Lot 21 east side of Chapel street.
20445	Oct. 11	Andrew Rockett <i>et ux.</i>	Lot 23 on east side of Welland street, and Lot "X" on the east side of Chapel street.
20446	Oct. 11	Jno. McNulty <i>et ux.</i>	Lots Nos. 14 and 15 on west side of Chapel street, and Lots 7 and 8 on east side of Wellington St.
20447	Oct. 9	Albert Cooper <i>et ux.</i>	Lots 8 and 9 on Wellington street.
20448	Oct. 9	Alfred M. Smerdon <i>et ux.</i>	Lots 20 and 21A on east side of Chapel street.
20449	Oct. 11	Wm. McNulty <i>et ux.</i>	Lot. No. 6, part of Lot No. 7 and Lot No. 8 on east side of Wellington street.
20450	Oct. 9	Chas. W. R. Lemon <i>et al.</i>	Lots 19 and 20 on east side of Chapel street, and Lots 16 and 17 on the west side of Wellington street.
20451	Oct. 9	Elizabeth Smerdon	Lots Nos. 22A and 23A on the east side of Chapel street.
20452	Oct. 8	Daniel Oates	Lot No. 24 on east side of Chapel St.
20453	Oct. 9	Fred. Johnson <i>et ux.</i>	Lot No. 1 east side of Wellington street, north of Albert street, and Lot No. 2 on north side of Albert street.
20454	Oct. 8	Donald J. C. Munro <i>et ux.</i>	Block "V" on east side of Chapel street.
20455	Oct. 8	Chas. Porter <i>et ux.</i>	Lot "W" on east side of Chapel street.
20456	Oct. 22	Mary Flynn <i>et al.</i>	Lots Nos. 19 and 20 on west side of Wellington Street.
20517	Nov. 27	James M. Upper <i>et al.</i>	Lot No. 18 west side of Chapel Street.
20539	Nov. 7	Robt. Constable <i>et ux.</i>	S. ½ of Lot 6 and Lot 7 west side Wellington street.
20540	Nov. 11	Nellie Fairlie	Lots 16 and 17 west side Chapel street.
20541	Nov. 11	Amelia Laurie	Lot 23 east side of Chapel street.
20542	Nov. 19	Thos. Hodgkinson <i>et ux.</i>	Part of Lot No. 10, Con. 2.
20543	Nov. 25	Wm F. Hoover	Lot No. 21 west side Wellington street.
20544	Nov. 25	Mercy E. McMann	Lots Nos. 24 and 25 and part of Lot No. 26, west side Chapel street.
20545	Nov. 25	Leslie McMann <i>et ux.</i>	Part of Lot 26 and Lots 27, 28, 29, 30, 31, 32, 33 and 34 on west side Chapel street; Lots 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22 on east side Welland street, and Lots 3, 4, 5, 6, 7, 8, 9, 10 and 11 on west side of Welland street.
20546	Nov. 27	Ira P. Upper <i>et ux.</i>	Lot 19 west side Chapel street.
20547	Dec. 26	Joseph Hunt <i>et ux.</i>	Lots 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52.
20548	Dec. 30	Benjamin C. Thomas <i>et ux.</i>	Part of the broken front lot in front of Lot No. 11, Con. 1.
20549	Dec. 6	Mary Nixon	Part of Lot No. 12, Con. 8.
20554	Dec. 30	Benjamin D. Thomas <i>et ux.</i>	Part of Lot No. 10, Con. 2.
1914			
20575	Jan. 13	Cecilia Battle <i>et al</i> (Estate John Battle).	Lots "A" and "B" on east side Wellington Street and north side of York street.
20576	Jan. 15	"	Lots. "L" and "M" on north side of Mill street and Lot 13 on west side of Wellington street.

SESSIONAL PAPER No. 20

for the Fiscal Year ended March 31, 1914.—*Continued.*

CANAL.

District.	County.	Area.	Amount.
			\$ cts.
Thorold.....	Welland, Ont.....		2,800 00
".....	".....		12,000 00
".....	".....		5,750 00
".....	".....		7,600 00
".....	".....		5,500 00
".....	".....		11,900 00
".....	".....		2,500 00
".....	".....		6,100 00
".....	".....		4,500 00
".....	".....		6,500 00
".....	".....		8,000 00
".....	".....		6,000 00
".....	".....		3,600 00
".....	".....		6,800 00
".....	".....		5,300 00
".....	".....		10,000 00
".....	".....		5,500 00
".....	".....		1,000 00
".....	".....		5,500 00
".....	".....		1,000 00
".....	".....		3,300 00
".....	".....		4,000 00
".....	".....		2,850 00
".....	".....		7,000 00
".....	".....		5,300 00
".....	".....		2,950 00
Grantham.....	Lincoln, Ont.....	4.68 acres.....	3,500 00
Thorold.....	Welland, Ont.....		660 00
".....	".....		4,860 00
".....	".....		11,540 00
".....	".....		1,000 00
".....	".....	11.81 acres.....	10,000 00
Grantham.....	Lincoln, Ont.....	12.23 acres.....	8,000 00
".....	".....	0.30 acres.....	150 00
".....	".....	28.25 acres.....	13,800 00
Thorold.....	Welland, Ont.....		3,400 00
".....	".....		5,350 00

5 GEORGE V., A. 1915

PROPERTY conveyed to the Department of Railways and Canals

WELLAND

Number of Deed.	Date of Deed.	Grantor.	Lot.
20641	Feb. 25	Jno. Constable <i>et ux.</i> ...	Lot No. 5 and north $\frac{1}{2}$ Lot 6 on west side of Wellington street
20642	Feb. 20	Margaret Ann Paxton <i>et al.</i>	Part Lot 10, Con. 1.....
	1913		
20764	Dec. 26	James Francis Titterton <i>et ux.</i>	Part of south $\frac{1}{2}$ of Lot 9, Con. 3.....
	1914		
20765	Mar. 25	Robt. Thompson <i>et ux.</i> ...	Parts of Lot 8 in Cons. 4 and 5.....
20819	Mar. 25	Jas. A. Rogers <i>et ux.</i> ...	Part of Lot 8, Con. 7.....

LETTERS PATENT ISSUED BY THE DEPARTMENT OF RAILWAYS AND

TRENT

No.	Date.	Grantee.	Description.
	1913		
20045	May 13	Alex. T. Green.....	Parcel of Lot No. 10, Con. 6, Township of Seymour, County of Northumberland, Ont.

WELLAND

	1897		
*20294	July 29	The G. T. Ry. Co. of Canada.	Part of Lot 15, Tp. of Thorold, Co. of Welland, Ont., parts of Lots 17 and 18, Con. 3, parts of Lot 17, Con. 4 and part of Lot 17, Con. 5, Tp. of Grantham, Co. of Lincoln, Ont.

*Too late for last year's report.

SESSIONAL PAPER No. 20

for the Fiscal Year ended March 31, 1914.—*Continued.*CANAL.—*Continued.*

District.	County.	Area.	Amount.
			\$ cts.
Thorold.....	Welland, Ont.		5,000 00
Grantham.....	Lincoln, Ont.....	7.92 acres.....	9,000 00
"	"	10.61 acres.....	5,500 00
"	"	48.03 acres.....	25,250 00
"	"	5.95 acres.....	6,500 00

E. E. FAIRWEATHER,
Acting Departmental Solicitor.

CANALS DURING THE FISCAL YEAR ENDED MARCH 31, 1914.

CANAL.

Area.	Amount.	Remarks.
•0054 acres.	Exchange of land.	

CANAL.

22.37 acres.		*Supersedes Letters Patent No. 12566.
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E. E. FAIRWEATHER,
Acting Departmental Solicitor.

5 GEORGE V., A. 1915

DAMAGES RELEASED by the Department of Railways and Canals during the Fiscal Year ended March 31, 1914.

CHAMBLY CANAL.

No. of Release	Date of Release.	Grantor.	Description.	Amount.
	1913.			\$ cts.
20222	July 4..	John G. Poupore & Co..	Of all claims, etc., for work extra done under Contract No. 17436, dated Dec. 15, 1908.	2,697 03

CULBUTE CANAL.

20229	July 22..	Joseph Gervais.....	Of all claims, etc., owing to damages by flooding to Island No. 10, Ottawa River.	125 00
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RIDEAU CANAL.

*20092	1911. Aug. 13..	Ottawa Northern and Western Ry. Co., Canadian Pacific Ry. Co.	Of all right, title, etc., in certain parcel of land Canal reserve leased by Letters Patent dated August 28th, 1899.	1 00
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SOULANGES CANAL.

20230	1913. July 7..	Aimee Gosselin.....	Of all claims, etc., owing to the death of her husband, Daniel Daoust.	500 00
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WELLAND CANAL.

20093	1913. April 11.	Jennie E. Babcock, <i>et al.</i>	Of all lands and privileges comprised in and demised by Indenture of Lease dated Feb. 11, 1880, from Her late Majesty the Queen to John Battle.	1 00
20555	1914. Jan. 29..	Alfred Jones.....	For damages consequent upon injuries to a horse when crossing bridge over Feeder Lock at Dunnville, Ont.	27 00

WELLAND SHIP CANAL.

20538	1913. Sept. 22.	John A. Oill.....	Of 4½ acres of land, pt. of Lot No. 11 in Con 1st, Tp. of Grantham, Co. of Lincoln, Ont, held under lease from A. Muir, dated Nov. 26, 1904.	895 00
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TRENT CANAL.

*19886	1911. Oct. 14..	Charles G. Thompson <i>et ux.</i>	For damages by water to Lot No. 2 in Block "A" Tp. of Otonabee, Co. of Peterborough, Ont.	120 00
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SESSIONAL PAPER No. 20

DAMAGES RELEASED to the Department of Railways and Canals during Fiscal Year ended March 31, 1914.—*Continued.*

TRENT CANAL.—*Continued.*

No. of Release	Date of Release.	Grantor.	Description.	Amount.
	1912.			\$ cts.
*19887	April 28.	Frank Cadigan.....	For damages by water to N.E. $\frac{1}{4}$ of Lot No. 5, in the 10th Con. of the Tp. of Ennismore, Co. of Peterborough, Ont.	1 00
*19888	Dec. 7.	Albert E. Bottum <i>et ux.</i>	For damages by water to Island No. 2, Pigeon Lake Tp. of Harvey, Co. of Peterborough, Ont.	200 00
*19902	Dec. 14.	Marie Louise Shannahan <i>et al.</i>	For damages by water to the S. $\frac{1}{2}$ of the N.E. $\frac{1}{4}$ of Lot No. 5 in the 9th Con. of the Tp. of Ennismore, Co. of Peterborough, Ont.	80 00
*19921	1913. Jan. 24.	William H. Grylls <i>et ux.</i>	For damages by water to pt. of Lot No. 49 North of Portage Road, 9th Con., Tp. of Eldon, Co. of Victoria Ont.	175 00
*19922	Jan. 24.	Gabriel Switzer <i>et ux.</i>	For damages by water to north part of the W. $\frac{1}{2}$ of Lot No. 22 in the 4th Con. of the Tp. of Emily, Co. of Victoria, Ont.	20 00
*19923	Jan. 24.	Albert Boynton.....	For damages by water to the W. $\frac{1}{2}$ of Lot No. 21 and to the S.W. $\frac{1}{4}$ of Lot No. 22 in the 8th Con. of the Tp. of Eldon, Co. of Victoria, Ont.	600 00
*19975	1911. Aug. 22.	Joseph Braithwaite <i>et ux.</i>	For damages by water to the E. $\frac{1}{2}$ of Lot No. 11 in the 3rd Con. of the Tp. of Alnwick, Co. of Northumberland, Ont.	80 00
*19976	July 21.	William Y. Field.....	For damages by water to part of Lots 5 and 6 in the 4th Con. of the Tp. of Alnwick, Co. of Northumberland, Ont.	75 00
*19977	1912. Nov. 13.	George C. Biggar <i>et al.</i> , (executors estate of late Emily S. Shoenberger).	For damages by water to Spook or Ghost Island, Rice Lake, Tp. of Hamilton, Co. of Northumberland, Ont.	50 00
†19978	1911. Oct. 19.	Caroline C. Ruttan.....	For damages by water to parts of N. $\frac{1}{2}$ of Lot No. 34 in the 8th Con., Tp. of Hamilton, Co. of Northumberland, Ont.	70 00
*19979	1912. Feb. 12.	John Michie <i>et ux.</i>	For damages by water to Lots Nos. 5 and 6 in Block "I" of Village of Bewdley, Tp. of Hamilton, Co. of Northumberland, Ont.	50 00
*19980	1911. July 5.	Hilda Stewart.....	For damages by water to the east part of Margaret's Island, Rice Lake, Tp. of Alnwick, Co. of Northumberland, Ont.	100 00
*19981	1910. Sept. 19.	Catherine S. Ainlay and Joseph Ainlay.	For damages by water to the S.W. corner of N. $\frac{1}{2}$ of Lot No. 34 in the 8th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	60 00
*19982	1912. Mar. 30.	Francis C. Richard <i>et ux.</i>	For damages by water to pt. of Lot No. 4, block "B," Village of Bewdley, Tp. of Hamilton, Co. of Northumberland, Ont.	40 00
*19983	1910. Nov. 30.	John D. Hayden <i>et ux.</i> ...	For damages by water to Hickory or Balsam Island, in Rice Lake, opposite Tp. of Alnwick, Co. of Northumberland, Ont.	300 00
19999	1913. April 12.	Richard J. Grandy <i>et ux.</i>	For damages by water to S.W. $\frac{1}{4}$ of Lot No. 19 in the 4th Con. of the Tp. of Emily, Co. of Victoria, Ont.	280 00
*20096	1913. Feb. 4.	Ellis B. Burrell <i>et al.</i> ...	For damages consequent upon removal of a barn situated on Lot No. 60, Block "F," Queen St., Campbellford, Ont.	175 00
*20097	Mar. 17.	Stephen H. Thorne <i>et ux.</i>	For damages by water to Little Fothergill Island in Pigeon Lake, Tp. of Ennismore, Co. of Peterborough, Ont.	200 00

5 GEORGE V., A. 1915

DAMAGES RELEASED to the Department of Railways and Canals during Fiscal Year ended March 31, 1914.—*Concluded.*TRENT CANAL.—*Concluded.*

No of Release.	Date of Release.	Grantor.	Description.	Amount.
				\$ cts.
20098	April 2..	Robert J. Edmison <i>et ux</i>	For damages by water to the N. $\frac{1}{2}$ of Lot No. 1 in the 6th Con. of the Tp. of Ennismore, Co. of Peterborough, Ont.	600 00
20099	April 22..	John Crowe <i>et al.</i>	For damages by water to the S.W. $\frac{1}{4}$ of Lot No. 21 in the 16th Con. of the Tp. of Harvey, Co. of Peterborough, Ont.	300 00
20100	May 12..	Michael C. Sullivan <i>et ux</i>	For damages by water to the W. $\frac{3}{4}$ of Lot No. 14 in the 7th Con. of the Tp. of Ennismore, Co. of Peterborough, Ont.	32 00
*20113	1911. Feb. 12..	Agnes Sidey.....	For damages by water to part of Lot No. 33 in the 8th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	50 00
20228	1913. April 22..	Herbert S. Byers <i>et al.</i> ...	Damages by water to N.E. angle of S. $\frac{1}{2}$ of Lot No. 23 and to S.E. $\frac{1}{4}$ of said Lot, 4th Con., Tp. of Emily, Co. of Victoria, Ont.	60 00
20249	July 26..	Sydney Hector Cluxton <i>et al.</i>	For damages by water to Lot No. 6 and No. 5 in 18th Con. of Tp. of Harvey, Co. of Peterborough Ont.	600 00
20282	Sept. 22..	John Kemp <i>et ux</i>	For damages by water to part of Park Lot No. 1, north of George Street, Village of Lakefield, Co. of Peterborough, Ont.	50 00
20560	Sept. 30..	Charles H. Grylls <i>et ux.</i>	For damages by water to Island No. 18A in Tp. of Smith and to Island No. 9 in Tp. of Dummer in Stoney Lake, Co. of Peterboro', Ont.	100 00
20596	1914. Jan. 23..	The Corporation of the Township of Fenelon..	For damages by water to roads, streets, highways, bridges and property belonging to Corporation in Tp. of Fenelon, Co. of Victoria, Ont.	500 00
20630	1913. Dec. 12..	Harry B. Peters <i>et ux</i> ...	For damages by water to part of Lot No. 10 in the 11th Con. of the Tp. of Percy, Co. of Northumberland, Ont.	75 00
20631	1914. Jan. 24..	David Logan <i>et ux</i>	For damages by water to Lot No. 8 in the 10th Con. of Tp. of Verulam, Co. of Victoria, Ont.	150 00
20632	1913. Dec. 10..	Isabella W. Davidson...	For damages by water to Lot No. 6 in the 19th Con. of the Tp. of Verulam, Co. of Victoria, Ont.	200 00
20633	Aug. 13..	Neil F. Macnachten <i>et al</i> (executors of estate of Eliz. Macnachten).	For damages by water to Island in Rice Lake, known as "Wrach or Rach Island," in the Tp. of Alnwick, Co. of Northumberland, Ont.	250 00
20634	July 14..	Walter Couchman <i>et ux.</i>	For damages by water to Lots 1 and 2 in Block "L," Lots 1 and 2 in Block "I," Lot 2 in Block "B," and part of Lot 17 in said Block "B," in Village of Bewdley, in the Tp. of Hamilton, Co. of Northumberland, Ont.	250 00
20784	1914. Jan. 26..	George H. G. McVity, (executor and trustee of estate of R. C. Smith).	For damages to Lots 6, 7, 8, 9 and 10 south of Francis Street, and Lots 1 and 2 north of Water Street, Village of Fenelon Falls, Co. of Victoria, Ont., consequent upon construction of Canal.	30 00
20785	Mar. 14..	Corporation of the United Townships of Burleigh and Anstruther.	For damages by water to Bridge and approaches thereto over Sucker Creek on the road from the Burleigh Road to Jack's Lake Settlement, Tp. of Burleigh, Co. of Peterborough, Ont.	60 00
20786	Mar. 23..	Annie Davis <i>et al.</i>	For damages by water to Lots Nos. 1, 2 and 3 in the 18th Con. of the Tp. of Harvey, Co. of Peterborough, Ont.	290 00

* Too late for last year's report.

E. E. FAIRWEATHER,
Acting Departmental Solicitor.

SESSIONAL PAPER No. 20

CONTRACTS entered into during nine months ended December 31, 1913.

INTERCOLONIAL RAILWAY.

Number of Contract.	Date of Contract.	Contractors.	Description.
1913.			
19955	April 1..	Canadian Car and Foundry Company, Limited.	Delivery of a Steel Underframe Tank Car of 8,000 Imperial gallons capacity.
19956	" 1..	Canadian Car and Foundry Company, Limited.	Delivery of 500 Steel Frame Box Cars of 60,000 pounds capacity.
19957	" 1..	Canadian Car and Foundry Company, Limited.	Delivery of 20 Refrigerator Cars of 60,000 pounds capacity.
19964	" 7..	Canadian Car and Foundry Company, Limited.	Delivery of 100 "Hart" Convertible Cars of 40 tons capacity.
19965	" 7..	Canadian Car and Foundry Company, Limited.	Delivery of 50 "Otis" All-steel Dump Cars of 50 tons capacity.
19985	" 15..	Canadian Locomotive Company, Limited.	Delivery of 10 Consolidation Type Freight Locomotives.
19986	" 15..	Canadian Locomotive Company, Limited.	Delivery of 5 Simple Switching Engines.
19987	" 16..	Canadian Car and Foundry Company, Limited.	Delivery of 100 Steel Underframe Platform Cars of 80,000 pounds capacity.
19991	" 19..	The Atlantic Sugar Refining Company, Limited.	Routing and shipping freight over railway.
19993	" 21..	Nova Scotia Car Works, Limited.	Delivery of 150 wooden box cars.
19994	" 21..	" " " "	Delivery of 250 steel frame box cars.
20000	" 22..	Sir W. G. Armstrong-Whitworth & Company, Limited.	Construction and delivery at a port on Northumberland Straits of a Steel Screw Ferry Steamer.
20004	" 28..	A. T. MacKie.....	Construction of a car ferry terminal at Cape Tormentine, N.B.
20020	May 3..	H. J. Phillips, R. E. Mutch and A. McLean.	Construction of spur line of railway from Pugwash, on Oxford Branch, to Pugwash Harbour, 1½ miles.
20044	" 20..	The Preston Car and Coach Company, Limited.	Delivery of 8 First Class Day Coaches for the Intercolonial Railway.
20047	" 26..	Montreal Locomotive Works, Ltd.	Delivery of 4 Pacific Type Passenger Locomotives.
20048	" 26..	" " " "	Delivery of 5 Consolidation Type Freight Locomotives.
20059	" 13..	The Pullman Company.....	Delivery of 3 Sleeping Cars.
20060	" 13..	" " " "	Delivery of 2 Dining Cars.
20066	" 30..	Canadian Car and Foundry Company, Limited.	Delivery of 2 65-foot Postal Cars.
20067	" 30..	Canada Foundry Company, Ltd..	Delivery of 10 Consolidation Type Freight Locomotives.
20075	April 19..	The Levis Ferry Company, Ltd..	For the transfer of all baggage from Levis to Quebec and from Quebec to Levis; for the transfer from cars and platforms at Levis, of all freight destined to be delivered into Levis Freight Shed, and for the transfer from ice-house at Levis, of all ice required for cars and station.
20116	June 21..	Canadian Car and Foundry Company, Limited.	Delivery of 4 Composite First-class and Baggage Cars.
20117	" 21..	Canadian Car and Foundry Company, Limited.	Delivery of 5 Vestibule Colonist Sleeping Cars.
20121	May 28..	Dominion Iron and Steel Company Limited.	Delivery of 3,000 tons of steel rails for Dartmouth to Deans Branch.
20177	July 17..	Colbrook Realty and Development Company.	For the construction of sidings connecting Contractor's premises with the Intercolonial Railway at Coldbrook, N.B.
20182	Aug. 6..	Dominion Iron and Steel Company, Limited.	Delivery of 10,000 tons of steel rails.
20199	May 29..	Nova Scotia Clay Works, Limited.	To lower and enlarge a culvert under railway near Lantz, in County of East Hants, at expense of Company, and Company to keep approaches on their property free for the passage of water.

5 GEORGE V., A. 1915

CONTRACTS entered into during nine months ended December 31, 1913.—*Continued.*INTERCOLONIAL RAILWAY—*Continued.*

Number of Contract.	Date of Contract.	Contractors.	Description.
	1913.		
20200	Aug. 15.	The Canadian Pacific Railway Company.	For running rights over the Fredericton bridge and approaches.
20245	Sept. 2.	Antoine J. Leger and Tilman D. Leblanc.	Erection of a passenger station at Bathurst, N.B.
20267	" 2.	Cook Construction Company, Ltd. & Wheaton Bros.	Construction of Sections Nos. 1 and 2 of the Halifax Ocean Terminals Railway.
20285	Oct. 6.	Soper & McDougall.	Widening of road-bed for double track between St. Romuald and Chaudiere Curve, Que.
20280	Sept. 30.	Dominion Bridge Company, Ltd.	Delivery of one steel turntable.
20290	Oct. 4.	The City of Sydney.	Supply of water.
20300	" 28.	Williams & Wilson, Limited.	Construction of a Mechanical Coal Handling Plant at Drummondville, Que.
20403	Sept. 23.	Niron S. Thompson.	Construction of a siding connecting ballast pit situated at a point near Sweet's Siding, 1.36 miles from Oxford Junction, with railway.
20404	" 23.	Francois Vaillancourt.	Construction of a siding connecting lumber yard at a point 3 miles east of Amqui, P.Q., with railway.
20405	" 29.	J. B. Snowball Company, Limited.	Construction of a siding connecting warehouse on wharf near Chatham, N.B., with railway.
20406	Oct. 1.	Wm. T. Robinson.	Construction of a siding connecting piling ground at a point 1 mile west of Blissfield, N.B., with railway.
20412	Nov. 8.	J. A. Boulay.	Addition to the freight shed at Causapscal, P.Q.
20413	Oct. 29.	K. A. Morrison.	Construction of a line of railway from Nelson to main line of I.C.R. at south end of south-west Miramichi River Bridge, and Wye at Derby Junction Station, N.B.
20414	Nov. 10.	"	Construction of pipe line and dam at Assamets-quaghan, Que.
20415	" 10.	"	Construction of pipe line at Campbellton, N.B.
20421	" 24.	"	Construction of pipe line and dam at Metapedia, Que.
20422	" 24.	McLaggan, McBean & Bell.	Erection of freight shed at Fredericton, N.B.
20426	Sept. 27.	The Renous Bridge Lumber Company, Limited.	Construction of a siding connecting a stone quarry at a point 1½ miles west of Renous, N.B., with railway.
20427	Oct. 9.	Hardwood Planing Mills, Limited.	Railway siding at Moffatt, N.B.
20457	Nov. 12.	The Bathurst Lumber Company, Limited.	Construction of a siding connecting loading ground at Bathurst with railway.
20458	Sept. 29.	The Imperial Oil Company, Ltd.	Construction of a siding connecting oil tank at Chatham, N.B., with railway.
20478	Dec. 26.	S. R. Gaudet and Oliver Dupuis.	Erection of passenger station and concrete platform at College Bridge, N.B.
20479	" 26.	S. L. Currie.	Combined section house and station at Graham's, N.S.
20480	" 26.	Sumner Company.	Erection and completion of a hot water heating system at Oxford Junction Station, N.S.
20481	" 26.	J. A. Boulay.	Erection and completion of extension of freight shed at Villeroi, Que.
20482	" 26.	"	Erection and completion of addition to freight shed at St. Francois, Que.
20483	" 26.	British-American Construction Company, Limited.	Erection of brick and stone passenger station, baggage and express rooms at Sussex, N.B.
20484	" 26.	J. W. Begin.	Erection and addition to freight shed at Montmagny, Que.
20485	" 26.	Murdoch McLeod and Robert Sinis.	Addition to freight shed at Westville, N.S.
20512	" 22.	Miramichi Foundry and Machine Works.	For the construction of a siding connecting a foundry at Chatham, N.B., with railway.

SESSIONAL PAPER No. 20

CONTRACTS entered into during nine months ended December 31, 1913.—*Concluded.*INTERCOLONIAL RAILWAY.—*Concluded.*

Number. of Contract.	Date of Contract.	Contractors.	Description.
	1913		
20527	" 31..	Finch, Pruyn & Company.....	For the erection of a siding connecting timber limits, lumber mills, etc., between Laurier and DeLotbinière.
20582	Sept. 25..	Restigouche Lumber Company, Limited.	For the construction of a siding connecting a saw mill with the railway at Dalhousie Junction, N.B.

PRINCE EDWARD ISLAND RAILWAY.

	1913.		
20241	Sept. 2..	Roger Miller & Sons, Limited....	Construction of car ferry terminals at Carleton Point, P.E.I.

E. E. FAIRWEATHER,
Acting Departmental Solicitor.

5 GEORGE V., A. 1915

PROPERTY LEASED by the Department of Railways and Canals

INTERCOLONIAL

No. of Lease.	Date of Signature.	Lessee.	Land or Rights demised.
	1913.		
19995	April 19	Jas. H. Hewson and Alexander A. Jones.	Land at Amherst, N.S.
20003	April 15	Wm. Gray-Sons Campbell, Ltd.	Land in Island Yard, City of St. John
20035	May 13	The Maple Leaf Telephone Co., Ltd.	Priv. to cross right of way with telephone wires enclosed in iron pipes at several places in Pictou County, N.S.
20036	May 13	P. C. Belle Isle.....	Land at a point 1.35 miles east of Campbellton Station, N.B..
a20056	May 20	Napoleon Dion.....	Land at Rivière du Loup, Que.....
20057	May 20	Price Bros. & Co., Ltd..	Priv. to string, etc., three No. 6 copper covered wires under and along south side of I.C.R. bridge crossing River du Sud at Montmagny, Que.
20058	May 20	R. J. Graham & Co.....	Land at Windsor, N.S.....
20156	June 21	David McDonald.....	Priv. to lay, etc., a 1-inch water pipe through culvert under tracks and across right of way of I.C.R. at Flatlands, N.B.
20165	June 10	John F. Kingston.....	Priv. to erect, etc., a tie loading plant or chute at the Deep Water Terminus of I.C.R. at Newcastle, N.B.
20197	Aug. 6	The Moncton Tramways Electricity & Gas Co., Ltd.	Priv. to lay, etc., a 4-inch iron gas pipe overhead across I.C.R. on the overhead Street Bridge on Union St., Moncton, N.B.
20198	Aug. 6	Town of Campbellton...	Land at Campbellton, N.B.....
20247	Sept. 4	City of Moncton.....	Priv. to lay, etc., two 18-inch and one 12-inch water pipe lines across lands and under tracks of I.C.R. in City of Moncton.
20269	Sept. 19	The Imperial Oil Co., Ltd.	Land at Sussex, N.B.....
20272	Sept. 23	Village of Amqui.....	Priv. to lay and maintain two 6-inch water pipe lines across lands and under tracks of I.C.R. at Amqui, Que.
20281	Sept. 27	James Dunlap.....	Land at Boisdale Station, Co. Cape Breton, N.S.....
20283	Oct. 1	The Imperial Oil Co., Ltd.	Priv. to lay and maintain two 2-inch wrought iron pipes across lands and under tracks of I.C.R. at a point 85 feet east of Chapel Street, Campbellton, N.B.
20470	Dec. 20	W. S. Sweet.....	Land at Folleigh Station, N.S.....
20471	Dec. 20	George St. Pierre & Co.	Land at Rivière du Loup, P.Q.
20472	Dec. 20	E. L. Jobb.....	The right to lay water pipes over the I.C.R. at New Mills, N.B.
20473	Dec. 20	Benjamin Steeves.....	Land at Flatlands, N.B.....
20474	Dec. 20	Frank Drysdale.....	Land at Wallace, Co. Cumberland, N.B.....
20475	Dec. 20	William S. Downes.....	Land at Flatlands, N.B.....
20489	Dec. 27	Maritime Coal, Railway & Power Co., Ltd.	Priv. to erect, etc., telephone and electric power wires across lands and over tracks of I.C.R. at Gould's Crossing, east of Amherst, N.S.
20502	Dec. 31	The Sydney Lumber Co Ltd.	Priv. to lay and maintain a 6-inch water pipe across lands and under I.C.R. tracks at Dalhousie, N.B.

PRINCE EDWARD

	1913.		
20157	July 2	The North Atlantic Fisheries, Ltd.	Portion of building on Railway Wharf at Alberton, P.E.I.....

a Cancelled by Notice No. 20510, dated November 19, 1913.

SESSIONAL PAPER No. 20

during the nine months ended December 31, 1913.

RAILWAY.

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First instal- ment due.
			\$ cts.		
750 sq. ft.....	During pleasure	April 1, 1913...	5 00	April 1....	April 1, 1913
7,500 sq. ft.....	" " 	April 1, 1912...	50 00	April 1....	April 1, 1912
.....	" " 	April 1, 1908...	8 00	April 1....	April 1, 1908
1½ acre.....	" " 	April 1, 1913...	1 00	April 1....	April 1, 1913
1,150 sq. ft.....	" " 	Sept. 1, 1911...	5 00	Sept. 1....	Sept. 1, 1911
.....	" " 	April 1, 1913...	1 00	April 1....	April 1, 1913
6,278 sq. ft.....	" " 	April 1, 1913...	1 00	April 1....	April 1, 1913
.....	" " 	April 1, 1913...	1 00	April 1....	April 1, 1913
.....	" " 	June 1' 1913...	1 00	June 1....	June 1, 1913
.....	" " 	June 1, 1913.—	1 00	June 1....	June 1, 1913
225 sq. ft.....	" " 	April 1, 1913...	1 00	April 1....	April 1, 1913
.....	" " 	April 1, 1913...	1 00	April 1....	April 1, 1913
800 sq. ft.....	" " 	Feb. 1, 1905...	5 00	Feb. 1....	Feb. 1, 1905
.....	" " 	April 1, 1913...	1 00	April 1....	April 1, 1913
2,000 sq. ft.....	" " 	Aug. 1, 1913...	5 00	Aug. 1....	Aug. 1, 1913
.....	" " 	April 1, 1913...	1 00	April 1....	April 1, 1913
6,482 sq. ft.....	" " 	Jan. 1, 1914...	1 00	Jan. 1....	Jan. 1, 1914
4,842 sq. ft.....	" " 	Jan. 1, 1914...	1 00	Jan. 1....	Jan. 1, 1914
.....	" " 	Jan. 1, 1914...	1 00	Jan. 1....	Jan. 1, 1914
2,139 sq. ft.....	" " 	Jan. 1, 1914...	1 00	Jan. 1....	Jan. 1, 1914
264 sq. ft.....	" " 	Dec. 1, 1913...	1 00	Dec. 1....	Dec. 1, 1913
1·2 acres.....	" " 	Jan. 1, 1914...	5 00	Jan. 1....	Jan. 1, 1914
.....	" " 	Jan. 1, 1914...	2 00	Jan. 1....	Jan. 1, 1914
.....	" " 	April 1, 1913...	1 00	April 1....	April 1, 1913

ISLAND RAILWAY.

.....	During pleasure.....	May 1, 1913...	60 00	May 1....	May 1, 1913
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E. E. FAIRWEATHER,
Acting Departmental Solicitor.

5 GEORGE V., A. 1915

PROPERTY LEASED to the Department of Railways and Canals by various
INTERCOLONIAL

No. of Lease.	Date of Lease.	Lessor.	Lands or Rights demised.
	1913.		
20034	May 13	Catholic Church of Parish of Ste. Cecile de Bic.	To lay and maintain a 6-inch drain pipe across church lands at Bic, Que.
20490	Dec. 27	The King Edward Hotel Co., Ltd.	Office, No. 51 King Street East, in Toronto, Ont.....

SESSIONAL PAPER No. 20

parties during the nine months ended December 31, 1913.

RAILWAY.

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First instal- ment due.
			\$ cts.		
.....	During pleasure of les- see.	April 1, 1913....	1 00	April 1....	April 1 1913
.....	3 yrs., renewable.....	Sept. 1, 1913....	2,400 00	Sept. 1....	Sept. 1, 1913

E. W. FAIRWEATHER,
Acting Departmental Solicitor.

5 GEORGE V., A. 1915

PROPERTY Conveyed to the Department of Railways and Canals
INTERCOLONIAL

Number of Deed.	Date of Deed.	Grantor.	Lot.
	1913.		
20298	July 31.	Clara G. Archibald...	Land at.....
	1911.		
*20301	Oct. 31.	Joseph Gardner and Annie Gardner.	Land at Nelson (Parcel No. 2).....
*20302	Mar. 3.	William Ronan <i>et ux</i> ...	Land at Nelson (Parcel Nos. 3 and 4).....
*20303	Mar. 6.	Michael Ronan.....	Land (Parcel No. 5) at.....
*20304	Mar. 25.	William Dolan <i>et ux</i> ...	Land (Parcel No. 7) at.....
*20305	Mar. 2.	Joseph Hayes.....	Land (Parcel No. 8) at.....
*20306	Oct. 20.	John P. Burchill <i>et ux</i> .	Land (Parcel No. 9A) at.....
*20307	Oct. 20.	John P. Burchill and Josephine Sargeant, Trustees and others	Land (Parcel No. 9B) at.....
	1910.		
*20308	Dec. 23.	Michael Fletcher <i>et ux</i>	Land (Parcel No. 10) at.....
	1911.		
*20309	Mar. 1.	Mrs. Eliza Getchell and Thomas Nixon.	Land (Parcel No. 11) at.....
	1910.		
*20310	Dec. 20.	John H. Sargeant, Chas. Sargeant and Edith Sargeant.	Land (Parcel No. 12) at.....
	1911.		
*20311	Mar. 11.	Josephine Sargeant, Elizabeth Percival.	Land (Parcel No. 13) at.....
*20312	April 6.	Ellen McCoombs and others.	Land (Parcel No. 14) at.....
	1910.		
*20313	Oct. 7.	Harriet J. Doran, Lena Doran, Gordon J. Doran and Woodside Doran.	Land (Parcel No. 15) at.....
	1911.		
*20314	Mar. 13.	Dennis Sullivan <i>et ux</i> ..	Land (Parcel No. 16) at.....
	1910.		
*20315	Dec. 23.	Alexander McFarlane <i>et ux</i> .	Land (Parcel No. 17) at.....
	1911.		
*20316	Mar. 13.	John P. Burchill <i>et ux</i> .	Land (Parcel No. 18) at.....
*20317	May 1.	J. B. McFarlane <i>et al</i> ..	Land (Parcel No. 19) at.....
*20318	June 9.	Alex. Henderson <i>et al</i> .	Land (Parcel No. 20) at.....
	1910.		
*20319	Dec. 22.	George Vye <i>et ux</i>	Land (Parcel No. 21) at.....
*20320	Dec. 21.	Elizabeth Vye <i>et mar</i> .	Land (Parcel No. 22) at.....
*20321	Dec. 21.	Robert P. Ullock.....	Land (Parcel No. 23) at.....
*20322	Dec. 29.	Howard Walls <i>et ux</i> ...	Land (Parcel No. 24) at.....
*20323	Dec. 21.	Thomas Fernandez....	Land (Parcel No. 25) at.....

SESSIONAL PAPER No. 20

during the nine months ended December 31, 1913.

RAILWAY.

District.	County.	Area.	Amount.
			\$ cts.
Moncton.....	Westmorland, N.B.....	28,117 sq. ft..	25,000 00
Nelson.....	Northumberland, N.B.....	8/100 acres...	53 54
"	"	1 " ..	1,093 75
"	"	74/100 " ..	343 75
"	"	1 76/100 " ..	520 83
"	"	40/100 " ..	416 66
"	"	41/100 " ..	430 00
"	"	41/100 " ..	430 00
"	"	1 76/100 " ..	312 50
"	"	1 53/100 " ..	208 33
"	"	5·10 " ..	625 00
"	"	1·13 " ..	312 50
Chatham.....	"	1·13 " ..	281 28
"	"	1·22 " ..	150 00
Nelson.....	"	1·35 " ..	156 25
"	"	1·16 " ..	140 63
"	"	1·58 " ..	166 63
Chatham.....	"	94/100 " ..	156 25
"	"	4·19 " ..	584 38
"	"	0·44 " ..	104 17
Nelson.....	"	0·37 " ..	104 17
Chatham.....	"	0·83 " ..	125 00
Nelson.....	"	0·52 " ..	125 00
Chatham.....	"	0·79 " ..	114 58

5 GEORGE V., A. 1915

PROPERTY Conveyed to the Department of Railways and Canals
INTERCOLONIAL

Number of Deed.	Date of Deed.	Grantor.	Lot.
1911.			
*20324	Mar. 16.	Margaret Ullock <i>et al</i> (estate Henry G. Ullock).	Land (Parcel No. 26) at.....
*20325	Mar. 6.	James A. Ullock <i>et ux</i>	Land (Parcel No. 27) at.....
1910.			
*20326	Dec. 20.	Andrew Bryce <i>et ux</i> ...	Land (Parcel No. 28) at.....
*20327	Dec. 23.	John R. Jackson <i>et ux</i> .	Land (Parcel No. 29) at.....
1911.			
*20328	Mar. 27.	Eliza A. Jackson.....	Land (Parcel No. 30) at.....
*20329	Mar. 13.	J. P. Burchill <i>et ux</i>	Land (Parcel No. 31A) at.....
*20330	April 18.	Lavinia Burchill and J. P. Burchill, Administrators.	Land (Parcel No. 31B) at.....
*20331	April 7.	Robert A. Murdock <i>et ux</i> .	Land (Parcel No. 32) at.....
*20332	Mar. 27.	Angus McIntosh <i>et ux</i> .	Land (Parcel No. 33) at.....
*20333	Feb. 27.	Jonathan Harper <i>et ux</i>	Land (Parcel No. 34) at.....
*20334	Mar. 6.	John Phee <i>et ux</i>	Land (Parcel No. 35) at.....
*20335	April 5.	Jane Phee <i>et al</i>	Land (Parcel No. 36) at.....
*20336	June 10.	Henry H. Ullock.....	Land (Parcel No. 38) at.....
*20337	Mar. 27.	Richard Williams <i>et ux</i>	Land (Parcel No. 39) at.....
1910.			
*20338	Sept. 30.	James Robins <i>et al</i>	Land (Parcel No. 40) at.....
1912.			
*20339	Feb. 20.	Alexander Thompson <i>et ux</i> .	Land (Parcel No. 47) at.....
1911.			
*20340	June 9.	Samuel Waddleton <i>et ux</i> .	Land (Parcel No. 48) at.....
1910.			
*20341	Dec. 20.	Geo. Simpson <i>et ux</i>	Land (Parcel No. 49) at.....
*20342	June 24.	Alexander Hay <i>et ux</i> ..	Land (Parcel No. 50) at.....
1911.			
*20343	Mar. 1.	Thomas Lane <i>et ux</i>	Land (Parcel No. 51) at.....
*20344	Mar. 1.	Joseph Rigley <i>et ux</i> ..	Land (Parcel No. 52) at.....
1910.			
*20345	Dec. 21.	Andrew H. Marquis <i>et ux</i> .	Land (Parcel No. 53) at.....
*20346	Dec. 23.	Timothy McDonald <i>et ux</i> .	Land (Parcels Nos. 54 and 59) at.....
*20347	Dec. 23.	Alexander Thompson <i>et ux</i> .	Land (Parcels 55 and 60) at.....
1911.			
*20348	Mar. 1.	William Wilkinson <i>et al</i> .	Land (Parcels 56 and 61) at.....
*20349	April 12.	Andrew H. Marquis <i>et ux</i> .	Land (Parcel 58B) at.....
*20350	Mar. 3.	Alexander Fraser <i>et ux</i>	Land (Parcel No. 62) at.....
*20351	Oct. 14.	Alexander Fraser <i>et ux</i>	Land (Parcel No. 63A) at.....

SESSIONAL PAPER No. 20

during the nine months ended December 31, 1913—*Continued.*RAILWAY.—*Continued*

District.	County.	Area.	Amount.
			\$ cts
Chatham	Northumberland, N.B.	0.39 acres.	83 33
"	"	0.41 "	83 33
"	"	0.79 "	130 21
"	"	0.58 "	135 42
"	"	0.57 "	93 75
Nelson	"	435/1000 "	83 33
Chatham .....	" .....	.435 "	83 33
"	"	2.26 "	260 42
"	"	1.10 "	130 21
"	"	2.23 "	270 83
"	"	1.37 "	156 25
"	"	0.40 "	83 33
"	"	2.22 "	243 42
"	"	1.19 "	197 92
"	"	0.62 "	120 00
"	"	0.7 "	202 50
"	"	0.65 "	303 75
"	"	1.52 "	506 25
"	"	1.2 "	566 04
"	"	1.29 "	455 62
"	"	0.44 "	506 25
"	"	0.43 "	810 00
"	"	{ 6,006 } sq. ft.	619 42
"	"	{ 6,500 }	938 54
"	"	{ 6,006 }	
"	"	{ 6,000 }	1,435 83
"	"	{ 10,300 }	
"	"	10,400	221 66
"	"	5,280	138 02
"	"	7,410	171 88

5 GEORGE V., A. 1915

PROPERTY Conveyed to the Department of Railways and Canals
INTERCOLONIAL

Number of Deed.	Date of Deed.	Grantor.	Lot.
	1910.		
*20352	Dec. 23.	Henry Kelly.....	Land (Parcel No. 65) at.....
*20353	Dec. 16.	J. B. Snowball Co., Ltd.	Land (Parcel No. 67 and 67A) at.....
	1911.		
*20354	May 15.	Mary Grant.....	Land (Parcel No. 68A) at.....
*20355	April 15.	Mary Jardine.....	Land (Parcel No. 68B) at.....
	1910.		
*20356	Dec. 17.	Duncan Cameron <i>et ux</i>	Land (Parcel No. 69) at.....
	1911.		
*20357	Nov. 23.	Lawrence K. Lloyd...	Land (Parcel No. 71) at.....
	1910.		
*20358	Dec. 21.	Samuel U. McCulley <i>et ux.</i>	Land (Parcel No. 72) at.....
	1911.		
*20359	Mar. 1.	James Stothart.....	Land (Parcel No. 73) at.....
*20360	May 12.	Isabella J. Letson <i>et al</i>	Land (Parcel No. 74) at.....
*20361	Mar. 20.	Johanna Hackett <i>et</i> <i>mar.</i>	Land (Parcel 75 and 77) at.....
	1910.		
*20362	Dec. 22.	Samuel Habberley, Surviving Trustee of R. S. Blackstock.	Land (Parcels 78 and 80) at.....
	1911.		
*20363	April 18.	Lydia E. Habberley <i>et al.</i>	Land (Parcel No. 79) at.....
*20364	Mar. 3.	Alexander Fraser <i>et ux</i>	Land (Parcel No. 82) at.....
*20365	June 13.	Richard D. Walsh <i>et</i> <i>ux.</i>	Land (Parcel No. 85) at.....
*20366	June 24.	William Wilkinson....	Land (Parcel No. 86A) at.....
	1910.		
*20367	Dec. 21.	Samuel U. McCulley <i>et ux.</i>	Land (Parcel No. 86c) at.....
	1911.		
*20368	Mar. 25.	James Desmond <i>et ux</i> and Patrick Joseph Desmond.	Land (Parcel No. 86D) at.....
*20369	Mar. 8.	James L. Stewart.....	Land (Parcel No. 88) at.....
*20370	Mar. 13.	William H. MacLach- lin <i>et ux.</i>	Land (Parcel No. 89) at.....
*20371	July 5.	Mary Ann Benson <i>et al</i>	Land (Parcel No. 91) at.....
	1910.		
*20372	Dec. 16.	J. B. Snowball Co., Ltd.	Land (Parcel No. 92) at.....
	1912.		
*20373	Mar. 28.	John D. Creaghan <i>et ux</i>	Land (Parcel No. 93) at.....
	1911.		
*20374	July 24.	John C. Miller <i>et ux.</i>	Land (Parcels Nos. 97 and 98) at.....

SESSIONAL PAPER No. 20

during the nine months ended December 31, 1913—*Continued.*RAILWAY.—*Continued.*

District.	County.	Area.	Amount.
			\$ cts.
Chatham	Northumberland, N.B.....	13,210 sq. ft.	2,208 33
"	"	{27,500} "	993 75
		{16,000}	
"	"	2,400 "	60 50
"	"	4,316 "	1,286 40
"	"	3,383 "	907 50
"	"	4,480 "	100 83
"	"	16,432 "	331 25
"	"	4,226 "	772 92
"	"	1,250 "	50 42
"	"	{1,592} "	282 33
		{1,075}	
"	"	4,256 "	2,097 92
"	"	4,000 "	3,422 92
"	"	6,070 "	2,318 75
"	"	43,700 "	15,437 50
"	"	2,458 "	100 83
"	"	6,620 sq. ft.	1,411 65
"	"	515 "	50 42
"	"	159 "	151 25
"	"	1,100 "	831 87
"	"	3,700 "	828 12
"	"	4,880 "	3,698 96
"	"	1,600 "	338 73
"	"	{5,400} "	10,375 00
		{28,660}	

5 GEORGE V., A. 1915

PROPERTY Conveyed to the Department of Railways and Canals

INTERCOLONIAL

Number of Deed.	Date of Deed.	Grantor.	Lot.
*20375	June 8.	Annie Adams <i>et mar.</i>	Land (Parcel No. 99A) at.....
*20376	April 25.	Agnes C. Anderson <i>et al.</i>	Land (Parcel No. 99B) at.....
*20377	Mar. 14.	John E. Ryan <i>et ux.</i>	Land (Parcel No. 102) at.....
*20378	June 12.	Eliza Kerr.....	Land (Parcel No. 105) at.....
*20379	May 5	Mary Ann Lyons (Guardian).	Land (Parcel No. 107) at.....
*20380	April 7.	Daniel W. Elkin.....	Land (Parcel No. 108) at.....
*20381	May 5.	Mary Lyons.....	Land (Parcel No. 109) at.....
*20382	Mar. 31.	Catherine Mulhearn <i>et al.</i>	Land (Parcel No. 110) at.....
	1910.		
*20383	Dec. 16.	J. B. Snowball Co., Ltd.	Land (Parcel No. 113) at.....
	1911.		
*20384	Mar. 2.	George England.....	Land (Parcel No. 115) at.....
*20385	Mar. 1.	Solomon Darbyson <i>et ux.</i>	Land (Parcel No. 116) at.....
*20386	Mar. 10.	Peter England <i>et ux.</i>	Land (Parcel No. 117) at.....
*20387	Mar. 10.	William Dick <i>et ux.</i>	Land (Parcel No. 119, 119A and 119B) at.....
	1911.		
*20388	April 15.	Mary Lillian Allen.....	Land (Parcel No. 120) at.....
	1910.		
*20389	Dec. 21.	Samuel U. McCulley <i>et ux.</i>	Land (Parcel No. 121) at.....
	1911.		
*20390	July 7.	John A. Irving <i>et ux.</i>	Land (Parcel No. 122) at.....
*20391	May 4.	Robina McIntosh.....	Land (Parcel No. 123) at.....
*20392	July 7.	Alexander Fenton <i>et ux.</i>	Land (Parcel No. 125) at.....
	1910.		
*20393	Dec. 20.	David Fenton <i>et ux.</i>	Land (Parcel No. 126) at.....
	1911.		
*20394	Mar. 11.	Thomas Rogers <i>et ux.</i>	Land (Parcel No. 128) at.....
*20395	June 12.	Mary Bremner <i>et al.</i>	Land (Parcel No. 129) at.....
*20396	April 27.	William Damery <i>et ux.</i>	Land (Parcel No. 132) at.....
*20397	Dec. 19.	Frances McEwen.....	Land (Parcel No. 133) at.....
*20398	Oct. 2.	Helen Dickenson <i>et mar.</i>	Land (Parcel No. 134) at.....
*20399	Dec. 19.	Peter England <i>et ux.</i>	Land (Parcel No. 135) at.....
	1913.		
20409	Oct. 3.	William H. Gould.....	Land at Elmsvale.....
20410	Sept. 17.	Frank A Reynolds <i>et al.</i>	Land at.....
20434	Sept. 17.	Wellwood Reynolds <i>et al.</i>	".....
20435	Oct. 7.	David Archibald <i>et al.</i> (Trustee Presbyterian Church).	".....
20436	Oct. 21.	Herbert Zwicker.....	Land at Elmsvale.....
	1911.		
*20437	June 6.	John R. Ryan <i>et ux.</i>	Land, part Lot No. 101.....
	1910.		
*20496	Dec. 23.	William Kelly <i>et al.</i>	Land, part of Lot No. 45.....
*20497	Dec. 31.	Charles Matthews <i>et ux.</i>	Land, part of Lot No. 127.....

SESSIONAL PAPER No. 20

during the nine months ended December 31, 1913—*Continued.*RAILWAY—*Continued.*

District.	County.	Area.	Amount.
			\$ cts.
Chatham	Northumberland, N. B.	3,000 sq. ft.	784 58
"	"	4,000 "	248 44
"	"	320 "	322 60
"	"	1,652 "	411 66
"	"	3,120 "	1,714 17
"	"	2,352 "	463 75
"	"	2,147 "	938 54
"	"	5,000 "	1,214 58
"	"	39,000 "	10,083 33
"	"	10,605 "	1,109 17
"	"	4,042 "	1,109 17
"	"	11,029 "	1,109 17
"	"	{ 0.05 acre 13,716 sq. ft. 2,200 " }	100 83
"	"	0.62 acre	\$203 33
"	"	0.80 "	254 17
"	"	0.80 "	468 75
"	"	1.26 "	461 25
"	"	1.23 "	881 88
"	"	1.23 "	406 66
"	"	0.81 "	254 17
"	"	2.41 "	625 00
"	"	0.90 "	41 00
"	"	3,372 sq. ft.	1,512 50
"	"	2,956 "	1,613 33
"	"	374 "	100 83
Middle Musquodoboit.....	Halifax, N.S.)	5.67 acre	141 75
Upper Musquodoboit.....	"	0.73 "	36 50
"	"	1.36 "	54 40
"	"	2.40 "	100 00
Middle Musquodoboit.....	"	1.87 "	56 10
Chatham	Northumberland, N.B.	526 sq. ft.	256 25
"	"	1.6 acre	506 25
"	"	0.80 "	254 17

5 GEORGE V., A. 1915

PROPERTY Conveyed to the Department of Railways and Canals

INTERCOLONIAL

Number of Deed.	Date of Deed.	Grantor.	Lot.
1911.			
*20498	Mar. 24.	Edward Fitzpatrick...	Land, part of Lot No. 76.....
1913.			
20499	Oct. 8.	Mary E. Watson <i>et al.</i> ...	Land at.....
20503	Oct. 9.	S. Louise Malcolm and	".....
	Oct. 16.	Richard M. Roberts..	".....
20504	Oct. 3.	John A. Gould <i>et ux.</i> ...	Land at Elmsvale.....
20505	Nov. 21.	Daniel W. B. Reid <i>et al.</i>	Land at Elmsvale.....
20506	Nov. 1.	David Pugsley <i>et ux.</i> ...	Land at Maccan.....
20531	Aug. 1.	James W. Murray <i>et ux.</i>	Land, and land covered with water.....
20532	Sept. 15.	Howard Fulton <i>et ux.</i> ...	Land at.....
20533	Sept. 17.	William Dechman <i>et ux.</i>	".....
20534	Oct. 1.	George Horne <i>et al.</i>	".....
20535	Oct. 1.	Charles McGunnigle...	".....
20536	Oct. 9.	James Holman <i>et ux.</i> ...	".....
1910.			
*20537	Dec. 19.	Mary Jane Sutton.....	".....
1913.			
20552	Nov. 27.	Buck Dillman <i>et ux.</i> ...	".....
1913.			
20572	June 25.	Harry H. Pickard <i>et ux.</i>	".....
20573	Nov. 21.	George A. Horton <i>et ux.</i>	".....
20574	Dec. 6.	A. Caspian Day <i>et ux.</i> ...	".....
20589	Dec. 1.	Alexander Burnett <i>et ux.</i>	".....
20591	Nov. 29.	Alexander Sutherland <i>et ux.</i>	".....
20592	Dec. 10.	Charles R. Tupper....	".....
20593	Dec. 31.	Joseph P. Taylor.....	".....
20615	May 22.	City of St. John.....	Parcel of Land.....
20633	Oct. 10.	Edward J. Trider.....	Land at.....
20654	Sept. 2.	Henrietta I. McNab <i>et al.</i>	".....
20655	Oct. 7.	Donald Horne <i>et al.</i>	".....
20656	Nov. 27.	Samuel Hiltz <i>et al.</i>	".....
20660	Nov. 15.	George J. Horne <i>et al.</i> ..	".....
20661	Oct. 7.	Margaret Booth <i>et al.</i> ..	".....
20662	Nov. 19.	The Starr Manufacturing Company, Ltd..	".....
20663	Oct. 3.	Henrietta I. McNab..	".....
20664	Sept. 24.	Benjamin Hines.....	".....
20666	Oct. 7.	Fannie Himelman <i>et al.</i>	".....
20667	Nov. 17.	Lydia Doherty <i>et al.</i> ...	".....
20668	Sept. 26.	Anne S. Beurce <i>et al.</i> ...	".....
20669	Sept. 24.	John E. Hines <i>et ux.</i> ...	".....
1912.			
*20675	Sept. 17.	Flora McNeil <i>et al.</i>	".....
*20676	Sept. 23.	Peter J. McNeil <i>et ux.</i>	".....
1903.			
*20679	June 11.	W. H. Moore.....	Lot No. 237 at.....
1913.			
20711	Oct. 2.	Henry Horne.....	Land at.....
20712	Sept. 20.	John Trider <i>et ux.</i>	".....
20735	Oct. 31.	Roderick J. McDonald <i>et al.</i>	".....
20736	Nov. 11.	Edward McKenzie <i>et ux.</i>	".....
20737	Nov. 14.	Ellen E. Donaldson...	".....

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during the nine months ended December 31, 1913—*Continued.*RAILWAY—*Continued.*

District.	County.	Area.	Amount.
			\$ cts.
Chatham.....	Northumberland, N.B.....	1,224 sq. ft.	44 17
Upper Musquodoboit.....	Halifax, N.S.....	0.91 acre	13 65
Little River.....	".....	3.14 "	200 00
			1 00
Middle Musquodoboit.....	".....	4.50 "	135 00
".....	".....	4.10 "	280 00
Maccan.....	Cumberland, N.S.....	0.109 "	175 00
Mulgrave.....	Guysborough, N.S.....		1,500 00
Upper Musquodoboit.....	Halifax, N.S.....	1.99 "	89 55
".....	".....	3.04 "	91 20
Eastern Passage.....	".....	1.23 "	40 00
Upper Musquodoboit.....	".....	2.17 "	150 00
".....	".....	0.05 "	1 00
Nelson.....	Northumberland, N.B.....	1.53 "	572 92
Upper Musquodoboit.....	Halifax, N.S.....	2.40 "	250 00
		0.10 "	
Gibson.....	York, N.B.....	0.74 "	1 00
Upper Musquodoboit.....	Halifax, N.S.....	2.55 "	140 00
Middle Musquodoboit.....	".....	4.95 "	125 75
Upper Musquodoboit.....	".....	2.83 "	323 50
Middle Musquodoboit.....	".....	5.79 "	186 20
".....	".....	6.20 "	750 00
".....	".....	0.88 "	44 00
Dufferin Ward.....	St. John, N.B.....		Exchange of land.
Eastern Passage.....	Halifax, N.S.....	1.23 "	25 00
".....	".....	2.11 "	500 00
".....	".....	0.76 "	20 00
West Lawrencetown.....	".....	1.78 "	25 00
Eastern Passage.....	".....	1.21 "	40 00
".....	".....	2.50 "	109 35
".....	".....	1.10 "	2,100 00
".....	".....	1.61 "	132 20
".....	".....	0.52 "	40 00
".....	".....	0.67 "	20 00
".....	".....	0.26 "	15 00
".....	".....	0.26 "	15 00
".....	".....	0.25 "	15 00
Grand Narrows.....	Victoria, N.S.....	3.03 "	1 00
".....	".....	2.08 "	93 60
Sydney.....	Cape Breton.....	1.36 "	139 19
Eastern Passage.....	Halifax, N.S.....	1.01 "	10 00
".....	".....	0.97 "	25 00
".....	".....	0.21 "	15 00
".....	".....	0.29 "	10 00
".....	".....	0.27 "	25 00

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PROPERTY CONVEYED to the Department of Railways and Canals
INTERCOLONIAL

No. of Deed.	Date of Deed.	Grantor.	Lot.
	1913.		
20738	Nov. 15.	John E. Horne <i>et ux.</i> ...	Land at.....
20756	Sept. 27.	Jeremiah Cleary <i>et ux.</i>	".....
20757	Nov. 17.	Kenneth McKenzie <i>et ux.</i>	".....
20758	Oct. 7.	Freeman Sawler <i>et ux.</i>	".....
20759	Dec. 9.	Clifford W. Rhind <i>et ux.</i>	".....
20822	June 2.	Alexander Thompson <i>et ux.</i>	".....
20834	June 10.	Alexander Hay <i>et ux.</i> ...	".....
20843	Dec. 10.	John Diekie <i>et ux.</i>	".....

PRINCE EDWARD

	1913.		
20677	Aug. 1.	Frank McVarish <i>et ux.</i>	Land at.....
20773	June 15.	Frederick S. McDonald.	Land at Tp. No. 45 and damages.....
	1910.		
*20774	April 15.	Neil A. Cheverie <i>et al.</i>	Land in Tp. No. 47.....
	1911.		
*20775	May 19.	Allan McDonald.....	Land in Tp. No. 45.....
*20776	April 13.	James N. McPhee <i>et ux.</i>	Land in Tp. No. 46.....
*20777	May 19.	Catherine McDonald.	Land in Tp. No. 46.....
*20778	Mar. 15.	Hugh J. Campbell....	Land in Tp. No. 47.....
*20779	Mar. 15.	John J. Campbell <i>et ux.</i>	Land in Tp. No. 47.....
*20780	Sept. 11.	Ada F. Boyd-Wallis <i>et al.</i>	Land in Tp. No. 46.....
	1912.		
*20781	Mar. 21.	Alfred Morrow.....	Land in Tp. No. 47.....
	1911.		
*20782	July 14.	Hugh J. Campbell....	Land in Tp. No. 47.....

* Too late for last year's report.

SESSIONAL PAPER No. 20

during the nine months ended December 31, 1913.—*Concluded.*RAILWAY—*Continued.*

District.	County.	Area.	Amount.
			\$ cts.
Eastern Passage	Halifax, N.S.	0.27 sq. ft.	150 00
“	“	6.37 “	60 00
“	“	0.08 “	90 00
“	“	0.12 “	5 00
Little River	“	6.55 “	131 00
Chatham	Northumberland, N.B.	1.50 “	175 00
“	“	0.88 “	100 00
Middle Musquodoboit	Halifax, N.S.	1.50 “	75 00

ISLAND RAILWAY.

Harmony Junction	Kings County	18,692 sq. ft.	75 00
“	“		1,000 00
“	“	0.86 acre	240 00
“	“	10.51 “	465 10
“	“	1.01 “	75 00
“	“	0.92 “	113 00
“	“	0.74 “	97 50
“	“	1.26 “	97 50
“	“	3.12 “	165 00
“	“	0.19 “	150 00
“	“	0.5 “	80 00

E. E. FAIRWEATHER,
Acting Departmental Solicitor.

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LETTERS PATENT issued by the Department of Railways

INTERCOLONIAL

No.	Date.	Grantee.	Description.
	1913.		
20460	Nov. 24.	City of St. John.....	Parcel of land in the City of St. John, N.B.

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and Canals during the nine months ended December 31, 1913.

RAILWAY.—*Doncluded.*

Area.	Amount.	Remarks.
.....	Exchange of land	

E. E. FAIRWEATHER,
Acting Departmental Solicitor.

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DAMAGES RELEASED to the Department of Railways and Canals during the nine months
ended December 31, 1913.

No. of Release.	Date of Release.	Grantor.	Description.	Amount.
	1913			\$ cts.
*1938	Mar. 5	Emily Grenier.....	Of all claims, etc., owing to the death of her husband, Xavier Letellier.	\$1,000 00
	1912			
*20094	Dec. 30	Alice McDevitt <i>et al.</i> ...	For damages to property on north side of St. George Street, City of Moncton, N.B., consequent upon construction of St. George Street Overhead Bridge.	400 00
	1913			
20095	April 11	Emil A. Wallberg.....	From and against all claims, damages, etc., arising out of or incidental to any contract or agreement heretofore entered into between himself and the Crown for services rendered, work done, etc.	59,357 08
*20139	Jan. 17	Hugh H. Reid.....	From and against all claims and demands on account of injuries sustained "Derby Junction Accident."	500 00
*20140	Jan. 30	Johanna Tobin.....	" " "	1,500 00
*20141	Jan. 30	Christopher O'Brien....	" " "	3,000 00
	1912			
*20142	Dec. 17	Joseph D. Armstrong...	" " "	2,050 75
	1913			
*20143	Jan. 24	William Irving.....	" " "	1,000 00
*20144	Feb. 3	Wesley D. Curtis.....	" " "	1,500 00
*20145	Feb. 19	Charles McDougall Administrator Estate of Harvey McDougall.	" " "	1,500 00
*20146	Jan. 30	Jane Clouston.....	" " "	1,500 00
	1912			
*20147	Dec. 20	Harry W. Steen.....	" " "	350 00
	1913			
*20148	Feb. 19	Katherine J. Harris (Administratrix estate of late Willard Harris.	" " "	3,000 00
*20149	Feb. 19	James Pleadwell (Administrator of estate of late Sadie Pleadwell).	" " "	3,000 00
20221	June 16	Onesime Carrier (Executor of estate of late Louis Napoleon Carrier <i>et al.</i>	From and against any and all claims and demands for labour performed by the late Louis Napoleon Carrier.	200 00
20223	July 5	Florence L. Tuttle.....	Of all claims, etc., owing to the death of her husband, Seldon C. Tuttle.	2,000 00
20224	July 11	Lewella Meredith Northrup.	Of all claims, etc., owing to the death of her husband, Harvey Allen Northrup.	2,000 00
20225	July 12	Frances McGill.....	Of all claims, etc., owing to the death of her husband, Peter McGill.	1,000 00

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DAMAGES RELEASED to the Department of Railways and Canals during the nine months ended December 31, 1913.—*Concluded.*

No. of Release	Date of Release.	Grantor.	Description.	Amount.
	1913			\$ cts.
20226	July 12	Mary Clarke.....	Of all claims, etc., owing to the death of her husband, James Clarke.	1,000 00
20227	July 12	Frances Hale.....	Of all claims, etc., owing to the death of her husband, Hugh R. Hale.	1,700 00
20234	July 8	Bernadette R. B. Bouchard.]	Of all claims, etc., owing to the death of her husband, Joseph A. Bouchard.	2,000 00

*Too late for last year's report.

E. E. FAIRWEATHER,
Acting Departmental Solicitor.

PART III.

REPORTS OF THE GENERAL MANAGER OF GOVERNMENT
RAILWAYS AND OTHER OFFICIALS FOR
THE YEAR 1913-14.

General Manager of Government Railways.

Report of the Chief Engineer, Government Railways.

“ Mechanical Accountant, Government Railways.

“ General Solicitor, Government Railways.

Statement of Casualties, Intercolonial Railway.

“ “ Prince Edward Island Railway.

Report of Comptroller and Treasurer, Intercolonial Railway.

“ “ “ Windsor Branch.

“ “ “ Prince Edward Island Railway.

“ “ “ National Transcontinental Railway operation.

“ Chairman and Secretary of Government Railways Provident Fund Board.

OFFICE OF GENERAL MANAGER OF GOVERNMENT RAILWAYS.

MONCTON, N.B., September 21, 1914.

SIR,—The undersigned has the honour to submit the following report on the working of the Canadian Government Railways during the fiscal year ending March 31, 1914.

The last official report on the working of Government Railways for the fiscal year ending March 31, 1913, was made under date of September 12, 1913, by the Government Railways Managing Board, which form of management was abolished on May 1, 1913; the management then being transferred to the General Manager of Government Railways.

The Government Railways, for the fiscal year ending March 31, 1914, consisted of the Intercolonial Railway, the Prince Edward Island Railway, and the Windsor Branch Railway.

Following the abolition of the Government Railways Managing Board and the transfer of the management to the General Manager of Government Railways certain changes were effected in several of the heads of the departments of the railway service, namely:—

The office of the Superintendent of Motive Power was superseded by the offices of the Superintendent of Rolling Stock and of Master Car Builder.

In connection with the engineering work the office of Chief Engineer of Government Railways was established and took over, together with the work of construction, the work theretofore under the Engineer of Maintenance, which latter position was abolished; a Division Engineer was appointed with head office at Moncton, reporting to the Chief Engineer on all engineering questions, and to the General Superintendent on all other matters pertaining to operation. Resident Engineers were appointed at various points on the railway, namely: Levis, Campbellton, Truro and New Glasgow; these officers were placed under the immediate supervision and direction of the Division Engineer in respect of engineering matters, and the Superintendents in respect of maintenance and operation matters. Bridge and Construction Engineers were appointed with direct supervision under the Chief Engineer, of the works appertaining to their respective offices.

The office of General Solicitor and General Claims Agent was established and the legal and general claims work of the railway theretofore conducted in part from the legal office of the Department of Railways and Canals at Ottawa, and in part from the head office of the railways at Moncton, was placed in the whole under the office so established.

Separate accounts were, during the said fiscal year, kept for each railway and these accounts will be considered separately in this report.

INTERCOLONIAL RAILWAY.

The following reports of the officials are enclosed:

Report of the Chief Engineer on works chargeable to Capital and Revenue Accounts.

Report of the Superintendent of Rolling Stock, statements relating to the Mechanical Department.

Report of the General Solicitor, (January 1 to March 31, 1914).

Report of General Superintendent, statement of casualties.

INTERCOLONIAL RAILWAY.—*Continued.*

The report of the Comptroller and Treasurer, as follows:—

1. Capital Account.
2. Revenue Account.
3. Maintenance of Way and Structures.
4. Maintenance of Equipment.
5. Traffic Expenses.
6. Transportation Expenses.
7. General Expenses.
8. General Store Account.
9. General Balance.
10. Statement of Receipt of Expenses.
11. Equipment Renewal Account.
12. Rail Renewal Account.
13. Fire Renewal Account.
14. Statement of Cash Received.
15. Statement of Averages.
16. Statement of Articles carried by the Railway.
17. Statement of Freight and Passenger Receipts.

The length of railway in operation during the year 1913-14 was 1457.77 miles, a shortening, on account of the track diversion, of the mileage in operation for the previous year.

CAPITAL ACCOUNT.

The cost of the road and equipment on March 31, 1913 was \$97,137,807.17. The additions during the year were as follows:—

To Strengthen bridges.	\$ 134,582 34
“ Increase accommodation, machinery, Halifax. . .	107,485 41
“ Locomotive and car shops with equipment, Moncton	132,170 25
“ Sydney Mines diversion.	17,306 93
“ Diversion of line and branch at wharf, Chatham..	45,271 77
“ Increase accommodation, Truro.	91,008 50
“ Surveys and inspection.	40,000 00
“ Increase accommodation, Ste. Flavie.	10,923 83
“ Improvements Pt. Tupper.	69,842 64
“ Increase accommodation, Fredericton.	19,990 68
“ Improvements, Sussex.	30,454 48
“ Spur line to Wallace harbour.	168 61
“ Increase accommodation, Mulgrave.	14,201 95
“ Rolling stock.	993,380 18
“ Improve tripple valves of air brakes.	7,150 00
“ General protection of highways.	33,532 52
“ Diversion of line between Nelson and Derby junction.	22,055 21
“ Increase accommodation and facilities along the line.	128,203 83
“ Increase water supply.	23,851 32
“ Spur line to Courtenay bay, St. John.	1,257 35
“ New terminal facilities, Halifax.	1,033,834 40
“ Spur line, Pugwash.	58,000 00
“ Double tracking Chaudiere Curve to St. Romuald	43,098 75
“ New station, Bathurst.	9,611 61

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INTERCOLONIAL RAILWAY.—*Continued.*CAPITAL ACCOUNT. *Continued.*

To Furnishings for office building, Moncton.. . . .	\$ 2,499 66
" Docks and wharves, Halifax.. . . .	308,769 28
" Improvements, Lévis.. . . .	58,025 18
" Elimination of level crossings and grades, Moncton.	25,949 49
" Increase accommodation, St. John.. . . .	20,000 00
" Increase accommodation, Riviere du Loup.. . . .	42 32
" Diversion of line between North Sydney and Leitches creek.. . . .	33,080 32
" Installation of Block system in connection with operation.. . . .	55,183 98
" Installation of telephone system in connection with operation.. . . .	39,270 66
" Installation of cork roofing, Moncton.. . . .	143 69
" Electrical equipment for charging electric lighted cars, Halifax.. . . .	1,807 00
" New car ferry and dock for same, Mulgrave.. . .	1,689 67
" Additional facilities at Riviere du Loup.. . .	171 63
" Safety appliances for equipment.. . . .	17,289 38
" Original construction.. . . .	35 37
Towards the construction of a railway from a point at or near Dartmouth in the County of Halifax, via Musquodoboit to Deans settlement in the said County.. . . .	700,656 69
Total.. . . .	\$101,469,807 05

Less—

By additional sidings and spur line—

Previous year's expenditure.. . . .	\$ 305 20	
Previous year's expenditure.. . . .	2,000 00	2,305 20

Making the total cost on March 31, 1914.. . . . \$101,467,501 85

Explanations in regard to the expenditure on Capital Account will be found in the reports of the Chief Engineer and the Superintendent of Rolling Stock.

The gross earnings and the working expenses for the year compare as follows:—

Gross earnings.. . . .	\$ 12,878,549
Working expenses.. . . .	12,867,249
Net earnings.. . . .	11,300

There was a gain of \$190,662.78 from the operation of the railway for the year. Of this surplus \$179,362.78 was transferred in March to Equipment Renewal Account so that when the books were closed at the end of the year they showed net earnings \$11,300.

The gross earnings compare as follows with those of the previous year:—

In 1913-14.. . . .	\$ 12,878,549 00
In 1912-13.. . . .	11,984,482 69
Increase.. . . .	\$ 894,066 31

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INTERCOLONIAL RAILWAY.—*Continued.*CAPITAL ACCOUNT. *Continued.*

The earnings from passenger traffic compare as follows:—

In 1913-14..	\$ 3,674,878 75
In 1912-13..	3,483,447 32
Increase..	\$ 191,431 43

The earnings from freight traffic compare as follows:—

In 1913-14..	\$ 8,469,590 33
In 1912-13..	8,028,760 13
Increase..	\$ 440,830 20

The earnings from mails, express freight and miscellaneous compare as follows:—

In 1913-14..	\$ 734,079 92
In 1912-13..	517,275 24
Increase..	\$ 216,804 68

The earnings by mile of railway compare as follows:—

In 1913-14..	\$ 8,839 27
In 1912-13..	8,162 98
Increase..	\$ 676 29

The earnings by train mile compare as follows:—

In 1913-14..	\$ 1 54
In 1912-13..	1 47

The numbers of passengers carried compare as follows:—

In 1913-14..	3,983,511
In 1912-13..	3,763,115
Increase..	220,396

There was an increase of 189,071 in the number of local passenger and of 31,325 in the number of through passengers.

The weight of revenue producing freight compares as follows:—

	Tons.
In 1913-14..	5,287,740
In 1912-13..	5,203,469
Increase..	84,271

There was a decrease in local freight of 129,795 tons and an increase in through freight of 214,066 tons.

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A number of statements which give detailed information in regard to the traffic are appended to this report. They are as follows:—

Statement of receipts, showing the receipts monthly from passenger traffic, freight traffic, and mails and sundries.

Passenger statement, showing monthly the number of local and of through passengers carried and the mileage.

Freight statement, showing monthly the number of tons of local and through freight carried and the mileage.

Comparative statement, showing the principal articles of freight carried during this year and the preceding year.

Descriptive statement of freight transported, showing a few of the principal articles.

Statement of coal transported, showing the stations from which it was sent.

Statement showing the quantity of raw and of refined sugar, of fresh and salted fish, of grain for export, and of European freight carried over the railway.

Statements of ocean-borne freight traffic at Halifax and at St. John, showing the quantity of freight imported and exported.

WORKING EXPENSES.

The working expenses compare as follows with the previous year:—

In 1913-14.. . . .	\$12,867,249 00
In 1912-13.. . . .	11,984,482 69
Increase.. . . .	\$ 882,766 31

The averages compare with those of last year as follows:—

Per mile run by engines—

In 1913-14.. . . .	1.25
In 1912-13.. . . .	1.16

Per mile run by trains—

In 1913-14.. . . .	1.54
In 1912-13.. . . .	1.47

Working expenses per mile of railway—

In 1913-14.. . . .	\$8,831 51
In 1912-13.. . . .	8,159 91

During the year, ending March 31, 1914, 685,418 ordinary ties were put in the track, and 216 miles ballasted and a total of fourteen miles of ditching completed in cuttings, to provide for better drainage for the road-bed. 12.497 miles of additional sidings provided at various points. Bridges, culverts, wharves, fences and buildings repaired and 40.72 miles of standard woven wire fence and 2.17 miles of snow fences erected.

The Superintendent of Rolling Stock reports rolling stock purchased, rebuilt in shops, etc.

As there were no accurate records of the physical characteristics of the railway, a resurvey to obtain these records was started, and the result of these surveys to March 31, 1914, is to be found in the report of the Chief Engineer. A large number of bridges on the railway reported for repairs, were repaired and a number reported for replacement were replaced by new ones. A statement of the bridges repaired and replaced is also to be found in the report of the Chief Engineer.

5 GEORGE V., A. 1915

Signals.

It was found necessary to the proper despatch and efficiency in the operation of trains to install automatic block signals. Approximately 10 per cent of this work was completed within the year in installation between the following points:—

Halifax and Windsor Junction, 14 miles double track.
 Painsce Junction and Moncton, 7 miles double track.
 Hampton and St. John, 20 miles double track.

The installation of telephone train despatching system between St. John and Halifax was commenced, and about 90 per cent was completed on March 31, 1914.

Electric crossing bells have been installed at thirty-eight crossings along the line of the railway.

New Lines.

A contract has been let for a diversion of the line from Nelson on the Loggieville subdivision, to the southwest Miramichi bridge on the Moncton subdivision, 2.69 miles in length, to replace existing lines 5.55 miles.

A contract has also been let for a line from Leitches creek on the Sydney subdivision to North Sydney, about 4.3 miles in length, and on March 31, 1914, approximately 3 per cent of the work completed.

Extensive improvements and additions in railway harbour facilities at Halifax have been undertaken and information of the extent of the work carried on to the end of the year is to be found in the Chief Engineer's report.

Stores.

The value of general stores carried over from previous year was.	\$1,465,157 78
The value of stores purchased and charged from other departments was.	5,997,858 05
Total.	\$7,463,015 83
The value of stores used and sold.	5,283,133 75
Balance of general stores on hand March 31, 1914..	\$2,179,882 08

Windsor Branch Railway.

The line extends from Windsor Junction to Windsor, N.S., and is 32 miles in length. It is operated by the Dominion Atlantic Railway Company, and is maintained by the Government, and the company pays the Government one-third of the gross earnings.

The following statement of the accounts prepared by the Comptroller is enclosed:—

No. 1.—Revenue account.

No. 2.—Maintenance of way and structures.

No. 3.—General balance.

No. 4.—Statement of earnings.

The revenue ($\frac{2}{3}$ earnings) was.	\$61,517 52
The cost of maintenance was.	26,486 98

Net earnings. \$35,030 54

The earnings decreased, and compare with those of the previous year as follows:—

Earnings, 1913-14.	\$61,517 52
Earnings, 1912-13.	68,246 70

Decrease. \$6,729 18

There was an increase in passenger traffic, while the mail earnings remained stationary. There was a decrease in freight traffic.

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PRINCE EDWARD ISLAND RAILWAY.

The length of railway in operation at the end of the year 1913-14 was 275.2 miles. The gauge is 3 feet 6 inches.

The cost of road and equipment on March 31, 1913,	
was.....	\$8,790,794 06
The expenditure during the year 1913-14 was..	129,574 95
<hr/>	
Making a total cost on March 31, 1914..	\$8,920,369 01
Gross earnings.....	\$409,616 74
Working expenses.....	571,415 37
<hr/>	
Deficiency.....	\$161,798 63

The gross earnings compare with previous year as follows:—

1913-14.....	\$409,616 74
1912-13.....	389,474 07
<hr/>	
Increase.....	\$ 20,142 67

The increase was in both passenger and freight traffic.

The working expenses compare with previous year as follows:—

1913-14.....	\$571,415 37
1912-13.....	489,972 34
<hr/>	
Increase.....	\$ 81,443 03

The necessary work was done to maintain the railway in a state of efficiency including the replacing of rails with heavier weights for a distance of over one mile, renewing of track and switch ties, and the ballasting of several miles of track.

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INTERCOLONIAL AND PRINCE EDWARD ISLAND RAILWAYS
EMPLOYEES' PROVIDENT FUND.

The report of the fund which has been separately furnished shows a credit balance on March 31, 1913.. . . . \$ 346,028 57

During the fiscal year the contributions of the employees amounted to.. . . . 99,805 03

The contributions of the railway amounted to.. . . . 99,805 03

Amount received for refund.. . . . 1,236 00

Total of.. . . . \$546,874 63

Total expenditure was.. . . . 167,701 19

Leaving a balance of.. . . . \$379,173 44

To which is to be added the interest 10,048 32

Making a total amount to the credit of the fund on

March 31, 1914.. . . . \$389,221 76

During the year one hundred and eight employees were retired and placed upon the fund, thirty-seven have died, leaving four hundred and eighty-five persons on the list receiving an allowance from the fund at the end of the fiscal year. This is an increase of seventy-one persons compared with last year.

I have the honour to be, sir,

Your obedient servant,

F. P. GUTELIUS,

General Manager of Government Railways

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY.

REPORT OF THE CHIEF ENGINEER'S DEPARTMENT.

ROADBED AND TRACK.

Subdivision or Branch.	TABLE OF MILEAGE.			
	Main Line Miles.	Second Main Line Miles.	Passing Sidings Miles.	Other Sid- ings and Spurs—Miles.
District No. 1—				
Ste. Flavie.....	83.29		8.20	20.85
Riv. du Loup.....	117.86		21.57	18.53
Levis.....	22.72		1.75	6.59
Chaudiere.....	115.53		11.10	16.50
Nicolet.....	14.70		0.60	0.90
Rivière Ouelle Wharf.....	6.19		0.90	
Rivière du Loup Wharf.....				4.80
Rimouski.....				2.10
Ste. Rosalie Jct. to Montreal (joint section).....	37.63			
Total.....	397.92		44.12	70.27
District No. 2—				
Moncton.....	185.37		15.86	48.07
Dalhousie.....	6.28			1.74
Campbellton.....	105.03		8.61	7.12
Fredericton.....	109.82		4.45	7.85
Loggieville.....	16.78		1.03	6.28
Total.....	423.28		29.95	71.06
District No. 3—				
Halifax.....	61.87	13.91	7.95	57.35
Truro.....	123.77	7.13	19.35	30.00
St. John.....	89.31	3.05	13.00	53.02
Dartmouth.....	12.00		0.25	3.50
Point du Chêne.....	11.98		1.00	3.50
Total.....	298.93	24.09	41.55	147.37
District No. 4—				
Sydney.....	91.17		4.0	19.94
Mulgrave.....	122.3	2.0	8.2	15.90
Stellarton.....	79.69		3.0	15.40
North Sydney.....	16.60		0.9	4.17
Trenton.....	8.46		0.3	4.70
Pugwash.....	4.54			1.20
Sunny Brae.....	12.48		0.2	0.60
Pictou.....	1.6		0.4	2.70
Total.....	336.84	2.0	17.0	64.61

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SUMMARY.

District No.	Main Line Miles.	Second Main Line-Miles.	Passing Sidings Miles.	Other Sidings and Spurs—Miles.
1.....	397.92	.....	44.12	70.27
2.....	423.28	.....	29.95	71.06
3.....	298.93	24.09	41.55	147.37
4.....	336.84	2.0	17.0	64.61
Total for Intercolonial Railway..	1,456.97	26.09	132.62	353.31

RAILS.

The main line has been relaid with new 80 lb. and 85 lb. rail on the several districts, as follows:—

	Track Miles.
District No. 1—Relaid with new 80 lb. rail.....	9.63 miles.
Relaid with new 85 lb. rail.....	2.75 miles.
District No. 2—Relaid with new 80 lb. rail.....	27.33 miles.
District No. 3—Relaid with new 80 lb. rail.....	9.31 miles.
District No. 4—Relaid with new 80 lb. rail.....	18.01 miles.
Total track miles of new rail laid.....	67.03 miles.

With the good relay rail released in laying the above, the main track was relaid at various mileages, and all piped, excessively battered or otherwise defective rails removed from the track.

The mileage of the various weights of rails in the main tracks of through main line and branches is as follows:—

Weight of rail	56 lb.	67 lb.	70 lb.	80 lb.	85 lb.
District No. 1—Miles.....	.....	19.41	16.37	328.11	2.75
District No. 2—Miles.....	26.0	109.75	.....	288.97	.....
District No. 3—Miles.....	4.0	53.88	.....	303.14	.....
District No. 4—Miles.....	19.71	87.29	.....	231.44	.....
Totals.....	49.71	270.33	16.37	1,151.66	2.75

New 85 lb. rail purchased and allotted in 1913 has been distributed for laying, as follows:—

District No. 1.....	27.99 track miles.
District No. 2.....	24.00 "
District No. 3.....	16.27 "
District No. 4.....	12.89 "
Total.....	81.15 "

The laying in of this new rail will be proceeded with as soon as the season is sufficiently advanced.

Worn out 56 lb. rail has been replaced with heavier weight rail in 7.17 track miles of sidings.

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RAIL YARD.

A new rail yard has been established at Moncton and 2,465 lineal feet of siding track laid for the loading and unloading of second hand rail. In this yard will be stored all second hand rail of various weights classified according to the service they are fit for, and from this point will be shipped all second hand rail required for the various works. There is at present stored in this yard the following rail:—

Size of Rail.	Main Line —Tons.	Branch Line —Tons.	Siding —Tons.	Scrap over 4 ft. —Tons.
80 lb.....		7.5	1,418.9	278.5
70 lb.....			17.3	
67 lb.....			227.3	44.0
58 lb.....			382.2	
56 lb.....			514.7	106.0
Total.....		7.5	2,560.4	428.5

In addition to the above there is at present stored in this yard 250.9 tons of new 85 lb. rails, to be used in the manufacture of frogs and switches and as emergency stock.

The balance of the second hand rail at present scattered over the railway will be picked up, classified and stored here during the coming year.

This system will permit of obtaining the utmost value from all rails released from the main line. Rails which are good for branch lines will be allotted for that service and will not be laid in side tracks, but used to change out light weight rails on these branch lines when necessary. Sidings will not be indiscriminately relaid with heavy weight rails; but when the condition of the light rails warrants it, allotment of heavy siding rail will be made for this purpose. The concentration of second hand rails will permit of an accurate record being kept of all rails in stock.

TIE RENEWALS.

Track ties have been renewed during the year, as follows:—

	Main Line.	Average per Mile.	Sidings and Spurs.	Average per mile.
District No. 1—No. of ties renewed.....	124,419	345	12,546	116
District No. 2—No. of ties renewed.....	211,041	496	16,582	234
District No. 3—No. of ties renewed.....	183,518	508	25,998	135
District No. 4—No. of ties renewed.....	166,440	492	23,666	290
	685,418		78,792	

BALLASTING.

Ballasting of roadbed has been completed over the following mileage:—

District No. 1.....	80.75 miles.
District No. 2.....	67.29 miles.
District No. 3.....	50.69 miles.
District No. 4.....	18.00 miles.
Total.....	216.75 miles.

And a total of 14.38 miles of ditching has been completed in cuttings so as to provide better drainage for roadbed.

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TILE UNDERDRAINING IN WET CUTTINGS.

Moncton sub-division, 8,000 lin. feet 6-inch tile pipe laid.
Truro sub-division, 500 lin. feet, 6-inch and 4-inch tile pipe laid.
Stellarton sub-division, 4,650 lin. feet, 6-inch tile pipe laid.
Pictou branch sub-division, 300 lin. feet, 6-inch tile pipe laid.

PROTECTION OF EMBANKMENTS AND CUTTINGS.

It has been found necessary to protect embankments at various points from scour by waves where adjacent to large bodies of water, or where exposed to the action of the spring freshet. Also in cuttings through wet clay or material readily effected by moisture crib walls have been erected to arrest slides. Such protection works have been carried out as follows:—

District No. 2.

Chatham.—363 cubic yards of heavy stone riprap on face of embankment at Walsh's Cove.
Quarryville.—New crib work 600 feet long in wet cutting.
Blackville.—300 lin. feet of old crib work renewed.
West of Matapedia.—500 lin. feet of crib work built to protect embankment along river bank.

District No. 3.

Two hundred and seventy-five lineal feet of crib protection and 100 lin. feet of heavy riprap have been built to protect embankments from scour.

District No. 4.

On the Sydney sub-division 1,025 lineal feet of crib protection has been erected to save embankments from sea wash; and between mileage 46 and 47, 300 lineal feet of crib wall has been built in cuttings to arrest sliding of material.

ROCK CUTTINGS.

On the Campbellton sub-division all loose and dangerous stones have been removed from rock cuttings; and on the Sydney sub-division between mileages 42 and 44, and on the Mulgrave sub-division between mileages 7 and 9 similar work has been undertaken.

NEW TRACKS.

DOUBLE TRACK CONSTRUCTION.

On District No. 1 between St. Romuald and Chaudiere Curve a distance of 3.75 miles, contract has been awarded for the construction of a second main track. Work was started in October 1913, and to date about 80 per cent of the excavation has been taken out, and the entire work is 45 per cent completed.

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MEETING SIDINGS.

New meeting sidings or extensions of meeting sidings have been constructed at the following points:—

<i>District No. 1.</i>	Lin. Ft.
Ste. Rosalie Jct., extension..	1,104

<i>District No. 2.</i>	
Assametquaghan, extension..	600
Moffats, extension..	282
Nelson, extension..	299
Chatham, extension..	85

 1,266
District No. 4.

Sydney Subdivision—

Mile 88-01—new..	1,185
Georges' River, new..	1,903
Barrachois, extension..	785
Hawkesbury Jct., extension..	761

Trenton Subdivision—

Mileage 0-2, new..	2,225
Mileage 0-2, new..	1,750

 8,609

SUMMARY.

District No. 1..	1,104
District No. 2..	1,266
District No. 3..	Nil.
District No. 4..	8,609

 Total.. 10,979

BUSINESS SIDINGS, ETC.

Business sidings, loading tracks and additional sidings for car storage at busy stations, and various track changes have been constructed as follows:—

District No. 1.

	Lin. Ft.
Ste. Rosalie, crossover..	190
Lévis, stock yard siding..	1,850
Mitchell, extension..	135
St. Andre, crossover..	250

 2,425
District No. 2.

Moncton, rail yard tracks..	2,615
Bathurst, additional tracks in yard..	6,264
Campbellton, coal tracks..	1,470
Nelson, new..	171
Chatham, additional tracks in yard..	3,481
Loggieville, new track..	300
Taymouth ballast pit, new track..	930
Fredericton, new freight shed tracks and team tracks with connections to yard..	7,645

 22,876

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<i>District No. 3.</i>	Lin. Ft.
Halifax, deep water terminal, additional sidings.. . . .	5,315
Halifax, Richmond yard, additional sidings.. . . .	24,000
Fairview, crossover.. . . .	220
Halifax sub-division M. 31.4, business spur.. . . .	625
Truro yard, additional sidings.. . . .	1,670
Amherst, additional sidings.. . . .	1,630
St. John, additional sidings.. . . .	2,174
	<hr/>
	35,634

<i>District No. 4.</i>	
Sydney, team loading tracks.. . . .	1,695
Sydney sub-division M. 68.9, business spur.. . . .	320
North Sydney sub-division M. 2.3, business spur.. . . .	332
Mulgrave sub-division M. 111.6, business spur.. . . .	275
Trenton, business sidings.. . . .	3,768
Oxford, business spur.. . . .	865
Stellarton sub-division M. 36.37, extension to business spur.. . . .	200
	<hr/>
	7,455

SUMMARY.

District No. 1.. . . .	2,425
District No. 2.. . . .	22,816
District No. 3.. . . .	35,634
District No. 4.. . . .	7,455
	<hr/>
Total.. . . .	68,330

PUGWASH BRANCH.

A spur line 6,050 feet long across Pugwash harbour to give a rail connection to the plant of the Nova Scotia Clay Works, and other industries, was started during the year and the grading is completed sufficiently to allow track to be laid throughout. Twelve thousand feet of track has been laid. A pile bridge 392 feet long has been built across the harbour, and all fencing and culverts completed. There is a D. G. swing span to be built on piles and concrete and the remainder of track laid and lifted and ballasted to a proper grade line.

PRIVATE SIDINGS.

The following sidings have been constructed for private firms:—

District No. 1.

Location.	Name of Firm or Person.	Lin. Ft.
Ste. Flavie.. . .	La Cie de Fonderie et Machineries (new).. . . .	380
Ste. Luce.. . .	La Cie de Chemin de Fer Neigette (connection)	200
Ste. Anne.. . .	College of Ste. Anne (new).. . . .	306
Montmagny.. . .	General Car Works (new).. . . .	880
Hadlow.. . . .	Agricultural Department (new).. . . .	874
Laurier.. . . .	Finch Pruyn Co., (new).. . . .	376
Nicolet.. . . .	International Harvester Company (new).. . . .	191
		<hr/>
		3,207

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Location.	Name of Firm or Person.	Lin. Ft.
<i>District No. 2.</i>		
Bathurst.....	Bathurst Lumber Co. (new).....	1,075
Moncton sub-division	M. 127-36, Gloucester Lumber and Trade Co. (new).....	325
Dalhousie Junction.	Dalhousie Lumber Co. (extended).....	52
Fredericton, S.D....	Mileage 43-81 W. Y. Robinson (new).....	312
Renous.....	Renous Lumber Co. (new).....	600
Chatham.....	J. B. Snowball Co., Ltd. (new).....	270
".....	" " " (new).....	318
".....	Miramichi Lumber Co. (new).....	324
".....	Miramichi Foundry Co. (new).....	263
".....	Imperial Oil Co. (new).....	306
Moffat's.....	Hardwood Planing Mills, Limited (new).....	879
Campbellton, S.D..	East of Amqui, Francois Vaillancourt (new)...	417
Dufaultville.....	Ernest A. Dufault (extended).....	80
		5,221

District No. 3.

Halifax, S.D....	M. 31-44, Nova Scotia Clay Works.....	865
".....	M. 89-5 Rhodes Curry Co.....	371
".....	M. 85-8 Maple Leaf Lumber Co's. extension.....	169
Sussex.....	S. H. White & Co.....	280
Coldbrook.....	Coldbrook Excelsior Works.....	350
Courtenay Bay..	St. John City.....	388
St. John.....	J. A. Likely & Son, Ltd.....	1,322
".....	Atlantic Sugar Refinery Co.....	700
Point du Chêne..	Roger Miller & Son.....	436
" " ..	" " ..	595
		5,476

District No. 4.

Sydney, S.D....	Mile 50-2 H. F. McDougall (new).....	380
Sydney, S.D....	Mile 60-5 H. F. McDougall (ext.).....	240
Mulgrave, S.D....	Mile 50-9 E. B. Heurtley's (new).....	240
".....	Mile 43-9 Cameron & Fraser (new).....	958
".....	Campbell's, A. A. Sutherland (new).....	600
Trenton.....	J. J. Grant & Son (new).....	654
Stellarton, S.D..	M. 1-36, N. S. Thompson (new).....	450
".....	M. 21-36, Batty Brick Co. (new).....	2,105
".....	M. 21-36, Batty Brick Co. (new).....	270
Bear Brook.....	Acadia Coal Co. (new).....	600
		6,478

SUMMARY.

District No. 1.....	3,207
District No. 2.....	5,221
District No. 3.....	5,476
District No. 4.....	6,478
Total.....	20,382

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CHANGES IN MAIN LINE.

District No. 2.

At a distance of about $2\frac{1}{4}$ miles from Moncton, a connection has been made between the Intercolonial and the line of the National Transcontinental Railway which permits traffic to leave Moncton over the N. T. R. low grade line avoiding the heavy one per cent gradient in the I. C. R. main line, and so doing away with assisting trains out of this yard.

WATER SERVICE.

District No. 1.

All tank spouts which, when not in use, projected over the track and so did not give proper clearance, have been changed to stand in a vertical position against tanks.

Ste. Helene.—Temporary pump installed on account of lack of water available from gravity supply.

St. Charles Junction.—Pump and coal shed extended 12 ft and new standard tank boiler installed.

Bagot.—New Standard Tank boiler installed.

District No. 2.

Matapedia.—Survey made and contract awarded for gravity water supply, which includes the construction of a dam and new 8-inch cast-iron pipe line 5,273 feet long. Pipe line laid and concrete dam 90 per cent completed.

Assametsquaghan.—Survey made and contract awarded for new gravity water supply. Work had to be postponed on account of severity of the weather at time contract was let.

Campbellton.—In order to increase the present gravity water supply contract was awarded for the laying of 6,850 lineal feet of 8-inch cast-iron pipe, but work was postponed on account of the severity of the weather at time contract was let.

Red Pine.—Pump house destroyed by fire and replaced with standard structure.

District No. 3.

Halifax.—New hydrant put in at pier No. 2 for fire protection.

Westchester.—Laid 125 feet of $1\frac{1}{4}$ -inch galvanized pipe from private well to station and installing pump in station dwelling. Supply for domestic purposes.

Thompson.—Relaid old 3-inch W.I. pipe line 4,570 feet long with 6-inch wire wound wooden pipe. Gravity supply.

Dorchester.—Drilled new 6-inch well 185 feet deep and installed hand pump. Station supply.

Petitcodiac.—Raised tank 2 feet and set same on concrete blocks.

Norton.—Renewed top of reservoir. Station supply.

Blomfield.—Well deepened to 16 feet and cased with 30-inch concrete pipe. Station supply.

Brockville.—New well dug 15 feet and cased with 30-inch concrete pipe. Station supply.

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Coldbrook.—Station supply 275 feet of $\frac{3}{4}$ -inch galvanized pipe laid connecting with Maritime Automobile Company's supply.

Hilden.—Station well 10 feet deep cased with 18-inch concrete pipe. Station supply.

District No. 4.

Boisdale.—New 40,000 gallon open wood tank built replacing 40,000 gallon wood tank.

West Bay Road.—New frame pump house with coal house built replacing frame pump house destroyed by fire. *See* 'Damage by Fire' also.

Mulgrave.—Water meter installed in concrete box to measure water sold to ships.

Avondale.—Well bored for station use.

Wallace Bridge.—Well bored for station use.

Monastery.—Well dug for station use.

In addition to the above, necessary repairs were made to water stations and water service equipment on the railway.

BUILDINGS.

New buildings, platforms, etc., or alterations or additions to existing buildings were constructed during the year as follows:—

*District No. 1.**Ste. Flavie Subdivision:*

Ste. Flavie.—New brick and stone passenger station completed and 870 feet of station concrete platform built. The freight shed was extended 100 feet, and the ice house was extended 63 feet 6 inches. Seven smoke jacks were renewed in the engine house.

St. Fabien.—300 feet new station platform built.

Rimouski.—Freight shed extended fifty feet (50').

Rivière du Loup Subdivision:

Rivière du Loup.—Bunk house and sand house built. Eleven smoke jacks were renewed in the engine house.

Dessaint.—Station platform extended 36 feet.

Montmagny.—Freight shed extended 100 feet, also a 100 foot extension made to the station platform.

St. Francois.—Freight shed extended 40 feet, also 40 foot extension made to station platform.

Chaudière Junction.—Ice house built. Twelve smoke jacks were renewed in the engine house.

Lévis Subdivision:

Lévis.—Cattle pen shed constructed, and a bond room 20 feet by 36 feet in freight shed. The changes necessary to accommodate the district offices in the station building were made.

Chaudière Subdivision—

Villeroi.—Freight shed extended 30 feet, also 30 feet extension made to platform.

St. Leonard Junction.—Station platform renewed.

Drummondville.—One hundred ton mechanical coaling plant built.

Ste. Rosalie Junction.—Coal and oil shed built.

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*District No. 2—**Moncton Subdivision—*

Moncton.—An extension was made to the freight car repair shop in steel and concrete, under contract, with an insulated wood roof and separate heating system. The extension was carried northwardly from the original building to the end of the planing mill, a distance of 404 feet, and westwardly in line with the western side of planing mill doubling the capacity of this shop. Alterations were made in the power house and a 400 H.P. Bettington boiler installed.

Collet's.—Cinder platform built.

Section No. 55.—Tool house built.

Red Pine.—Pump house built.

Bathurst.—New brick station and concrete platform built.

Jacquet River.—New cattle pen built.

Section No. 66.—Tool house built.

Section No. 67.—Tool house built.

New Mills.—Station platform built.

Charlo.—Station platform renewed.

Eel River.—Station platform built.

Campbellton Subdivision—

Campbellton.—Ice house built, and yard office extended and rearranged for car checkers

Causapsal.—Freight shed extended 25 feet.

Loggieville Subdivision—

Nelson.—Loading platform built.

Fredericton Subdivision—

Fredericton.—Contract was let for freight shed on concrete foundation and concrete platform. Shed 30 feet by 304 feet, with office accommodation and warm room. Loading platform and team tracks were built. Six thousand six hundred and five feet of track laid.

*District No. 3.**Halifax Subdivision—*

Halifax.—Shed built on pier No. 6.

Fall River.—Tool house built, and platform extended 120 feet with cinders.

Wellington.—Tool house built.

Dewis.—Station platform extended 90 feet.

Grahams.—New station built and platform extended.

Truro Subdivision—

Truro.—Stone passenger station, which provides accommodation for district offices and restaurant completed, and concrete platform; also "tarvia" pavement on esplanade back of station from south end of the station eastward. New cattle pen built. New icehouse built.

Folleigh.—Ice house built.

Oxford Junction.—New basement under part of station and hot water heating system installed.

Dorchester.—Station platform extended.

College Bridge.—New station built, and freight shed moved to new location.

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St. John Subdivision—

Moncton.—Verandah built on general manager's house. New pay office built in conductor's waiting room and restaurant in station remodelled.

Boundary Creek.—Freight shed extended 22 feet.

Sussex.—Contract was let for a brick and stone passenger station and baggage room, which are about 89 per cent completed.

Jubilee.—Freight shed extended 16 feet.

St. John.—The end wall of train shed removed and replaced with wood posts; also ticket office and newsroom remodelled.

Point du Chene Subdivision—

Shediac.—Drain 522 feet long laid from station cellar to sewer with 6-inch vitrified pipe.

*District No. 4.**Sydney Subdivision—*

Point Tupper.—Section tool house built. Carpenter shop built. Sand house built. Fourteen pocket, air hoist coaling plant erected. Double dwelling built. Brick and stone passenger station with hot water heating completed; also concrete platform built, 100 feet concrete ash pit built.

Cleveland.—Standard shelter station built.

Mile 10-61.—Loading platform built.

Mile 68-55.—Loading platform built.

Mulgrave Subdivision—

Hopewell.—Section tool house built.

Stellarton.—Concrete drop pit in car shop built. Mechanical stores building was remodelled.

Merigomish.—Section tool house built.

Marshy Hope.—Section tool house built.

Pirate Harbour.—New concrete ash pit built, required on account of yard re-arrangement.

Mulgrave.—Ice house built. Six sheet iron houses covering machinery on top of hoisting towers of transfer platform built to replace six wooden houses.

North Sydney Subdivision—

Watson's Cove.—New shelter built.

Little Bras d'Or.—New station and dwelling built.

Florence.—New station and dwelling built.

Stellarton Subdivision—

Loch Broom.—New shelter built.

Westville.—New section tool house built. Extension to freight shed.

Pictou Subdivision—

Pictou.—Extension to ice house fifty feet. New concrete ash pit 30 feet long. Mechanical stores building was remodelled.

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FENCING (NEW AND REPAIRS).

40.72 miles of standard woven wire fence has been erected, and 2.17 miles of snow fences erected, as follows:—

Subdivision.	Wire Fence, Miles.	Snow Fence Miles
<i>District No. 1—</i>		
Rivière du Loup.. . . .	6.59	1.00
Lévis.. . . .	1.00	0.00
Chaudière.. . . .	0.30	0.00
<i>District No. 2—</i>		
Campbellton.. . . .	6.90	0.41
Moncton.. . . .	3.78	0.10
<i>District No. 3—</i>		
Truro.. . . .	1.25	0.00
St. John.. . . .	4.02	0.47
Windsor.. . . .	1.75	0.00
<i>District No. 4—</i>		
Sydney.. . . .	3.00	0.19
Mulgrave.. . . .	9.00	0.00
Stellarton.. . . .	3.13	0.00
Total.. . . .	40.72	2.17

MAIL CATCHERS.

Mail catchers were erected at the following locations on the Ste. Flavie Subdivision: Ste. Luce, St. Anaclet, St. Simon, St. Eloi, St. Arsene. Halifax Subdivision: Fairview.

TURNABLES.

Foundation, centre pier and end wall for standard 80 foot turntable was built at Sayabec, and the grading of approach completed. Contract has been let for the turntable.

A 75 foot through plate girder turntable on concrete foundation was installed at Point Tupper to replace the old 55 foot turntable at that place.

The centre of the turntable at Chaudière Junction was renewed.

TERMINAL IMPROVEMENTS.

Improvements at terminals have been shown under various headings.

Ste. Rosalie Junction—

One crossover track was built in yard to complete the yard rearrangement started in 1912.

Halifax—

At Richmond Yard a high rock bluff on the inside of a 10 degree curve has been removed so that the curvature of the main line has been reduced to a 6 degree curve. Yard at this point is being entirely remodelled. Work 90 per cent completed.

Halifax Ocean Terminals—

Following upon the filing of the plans and descriptions for the expropriation of the terminal site on the 13th February, 1913, and for the right of way of the approach railway and yards on the 7th March, 1913, detailed plans and descriptions

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with areas and full particulars of each separate property were prepared from new and original surveys and from deeds, descriptions and plans in the possession of the various owners. During the year detailed surveys, plans and descriptions have been made for 75 properties representing a total area of about 150 acres. These plans, areas and descriptions have been supplied to the board of appraisers and the solicitors appointed to value and acquire the land required.

Existing buildings and structures on the terminal site and right of way of the railway were vacated, sold and removed as the work progressed and it was found necessary to clear the areas required for the construction of the railway and other works. The sales by public auction for the disposal of the existing buildings were held in 1913 on June 27, August 5, October 2, October 24, November 4, and in 1914 on January 5.

Plans and specifications were prepared and tenders called for on the 29th of May, 1913, for the grading of the Halifax Ocean Terminals railway including fencing, clearing, grubbing, grading, culverts, temporary bridges, road and street diversions and alterations; the construction of a rubble mound breakwater at Point Pleasant park and filling up bulkhead quays and piers in Halifax harbour and also for the freight terminal yard and alteration of the Intercolonial railway at Bedford basin and Rockingham and Fairview.

The whole work was divided into two contracts or sections. Section No. 1 included all the work required between Rockingham and Jubilee house. Section No. 2, all work south and east of Jubilee house, including the breakwater, filling and terminal yards at Halifax harbour. Separate tenders were obtained for each of the two sections and the tenders of the Cook Construction Company, Ltd., and Wheaton Bros., were accepted for both sections on July 2, 1913.

Work was begun on the Fairview end of the railway towards the end of July, and on the Halifax harbour end in August, and construction camps have been established at each end.

The clearing of the right of way has been completed from Bedford basin to Coburg road, and from South street to Halifax harbour. Stanford's ponds at Fairview were drained in August, and a temporary junction was made with the main line of the Intercolonial railway.

The contractors' temporary standard gauge tracks have been extended southward beyond Bayers' road and the excavation of the cutting between Stanford's ponds and Bayers' road is being proceeded with. Considerable difficulty has been encountered in blasting the hard laminated shale rock in this heavy cutting due to the great dip of the strata and as a result the progress made has not been so good as the contractors had anticipated.

The excavated materials from this cutting are being used for filling along the west shore of Bedford basin to make up the site for the freight terminal yard between Rockingham and Fairview.

The Western Union Telegraph Co.'s lines have been diverted from the east side to the west side of the Intercolonial railway, between Rockingham and Fairview so as to be clear of the new freight terminal yard.

A concrete culvert has been completed under the railway at station 75-40—just north of Mumford road.

Grading has been nearly completed south of Mumford road from station 80:00 to station 96:50 and near Quinpool road from station 113:00 to station 118:10.

The excavation of the main line cutting and terminal site and the filling in Halifax harbour is being proceeded with, between Bower road and the Halifax gas works.

A temporary standard gauge branch line for the construction of the breakwater has also been constructed from the main line near Young avenue to the site of the breakwater near Fort Ogilvie in Point Pleasant park.

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DOCKS—FIRST UNIT—HALIFAX OCEAN TERMINALS.

Detailed plans and specifications were prepared and tenders called for on September 2, 1913, for Contract No. 3, docks, first unit, of the Halifax Ocean Terminals, which included 6,532 lineal feet of concrete quay wall; dredging of the harbour to a depth of 45 feet at low water of ordinary spring tides; filling and grading of areas to be reclaimed from Halifax harbour; construction of main intercepting and outfall sewers, and concrete and timber piling and concrete foundations and substructures for passenger and cargo transit sheds and buildings. In response to the first call for tenders, several were received, but as none of them were satisfactory, all were rejected. Tenders were called for a second time, and several were again received on the 20th of November. The tender of Messrs. Foley Brothers, Welch, Stewart and Fauquier was accepted on the 27th November, and the contractors arrived in Halifax and established their offices there, in January, 1914.

A camp building, stores, machine and blacksmith shops are being fitted up on Pleasant street, near the site of the dock works.

On account of the depth of water required and the nature of the work to be done in connection with this contract, a large amount of new and specially built plant has to be provided. The type and details of plant to be used have been carefully considered.

A sub-contract for dredging and for the filling of the reclaimed areas with materials to be borrowed by dredging has been let by the principal contractors to the W. J. Poupore Company, Limited, Montreal. The latter's steam suction hopper dredge *Prince Ito* started work on the 24th March filling for pier "A". Arrangements have been made for the steam dipper dredge *King Edward*, belonging to the same company, and now at Bathurst, N.B., with its accompanying scows and tugs to begin work as soon as possible after the harbour at Bathurst is clear of ice.

ENGINEERING.

(Halifax Ocean Terminals.)

The superintending engineer's office which has been temporarily located in Montreal from December, 1912, was transferred on August 18, to 137 Pleasant street, Halifax, a property on the terminal site which has been acquired by the Government, and which was converted into an office for the superintending engineer and his staff. An office engineer, resident engineer for the railway works, resident engineer for the dock works and a chief clerk were appointed, and the necessary staff of assistant engineers, draughtsmen, instrumentmen, etc., organized and equipped to design and take charge of the works.

Point du Chêne.—A drain 1,052 feet was laid from the turntable pit at this place.

Pirate Harbour and Mulgrave.—Yard at Pirate Harbour was enlarged, a total of 3,562 feet of track being laid. Meter in concrete box installed to measure water supplied to ship. Mechanical stores building remodelled.

Point Tupper.—During the year a complete rearrangement of the yard was made involving extensive excavation and the relocation of and relaying of all existing sidings, which resulted in the changing of 15,000 feet of existing sidings and the addition of 6,080 feet of sidings. This work, and the buildings mentioned are mainly on account of the fire which wiped out practically all the terminal buildings at Point Tupper in 1912, and the yard changes were due to the rearrangement made by the change in location of the various buildings. This work is 99 per cent completed.

Sydney.—Mechanical Stores Building remodelled. Second-hand boiler installed in engine house. Extension to ticket office.

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DAMAGES BY FLOODS.

Slight damage was done to the road bed in April at six (6) points on Fredericton subdivision on account of ice jam in the Nashwaak river.

The spring freshet caused slight damage on the Truro subdivision, as follows:—
Maccan.—Dam above track broke, washing out the ballast section.

Little Forks Bridge.—Dam broke and undermined pier of the bridge. Repaired with rip-rap and crib work.

DAMAGE BY FIRE.

Rivière du Loup Subdivision.—

St. Paschal.—Two hundred feet of railway fence burnt October 1, 1913.

Chaudière Subdivision.—

St. Eugene.—Three box cars, 75 ties and 309 feet of rail fence burnt June 22, 1913.

Moncton Subdivision.—

Bathurst.—Station burnt down April 5, 1913.

Red Pine.—Pump house burned down July 23, 1913.

Campbellton Subdivision.—

Campbellton.—Inside office and store adjoining engine house gutted by fire February 9, 1914.

Truro Subdivision.—

Amherst.—Section tool house burned down, February 14, 1914.

Windsor Subdivision.—

One-quarter mile of railway fence burned, August 22, 1913.

Mulgrave Subdivision.—

Hopewell.—Section tool house burned down May 26, 1913.

Marshy Hope.—Section tool house burned, April 23, 1913.

Sydney Subdivision.—

West Bay Road.—Pump house burned down August 23, 1913.

Cleveland.—Shelter station burned down, October 3, 1913.

Stellarton Subdivision.—

Loch Broom.—Shelter station burned down, June 11, 1913.

NEW LINES TAKEN OVER.

August 21, 1913, the "Sydney Mines Diversion," 9.53 was completed and put in operation as part of the North Sydney subdivision. This length of track connected Sydney Mines, on the North Sydney subdivision, with Sydney subdivision at Georges river, and the work involved consisted of extensions and additions to the sidings at Sydney Mines, connection with the Nova Scotia Steel and Coal Company's mines at Florence, a combined station and dwelling and a through siding at Florence, a connection with the McKay line at Little Bras d'Or, a combined station and dwelling and a short business siding at Little Bras d'Or, a passing siding at mile 4.8 and a short business siding and a shelter station at Watson's cove. The entire "diversion" has been laid with new 80-lb. rails; all bridges and culverts are of a permanent construction; the entire length has been fenced, and road-bed is standard.

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NEW LINES—UNDER CONSTRUCTION.

A contract has been let for a diversion of line from Nelson, on the Loggieville-subdivision, to the south-west Miramichi bridge, on the Moncton subdivision; 2.69 miles to replace existing line 5.55 miles. Contractor has plant on the ground ready to start work.

A contract was let for a line from Leitches creek, on the Sydney subdivision to North-Sydney, on the North-Sydney subdivision, about 4.3 miles. Work three per cent completed.

RESURVEYS.

As there were no accurate records of the physical characteristics of the railway, the works of resurveys to obtain these records is under way and following completed at 31st March, 1914.

Resurveys for standard right of way plans:—

Halifax subdivision—

Mileage 0.00 to 61.87. 61.87 miles.

Plans for above completed.

Mileage 0.00 to 40.00. 40.00 miles.

Resurveys for standard track profiles:—

Halifax subdivision—

Mileage 0.00 to 61.87. 61.87 miles.

Truro subdivision—

Mileage 0.00 to 46.42. 46.42 miles.

Total. 108.29 miles.

Profiles for above completed.

Halifax subdivision—

Mileage 0.00 to 61.87. 61.87 miles.

Standard station yard plans have been completed as follows:—

Chaudière subdivision.	4 plans.
Lévis subdivision.	1 "
Rivière du Loup subdivision.	4 "
Ste. Flavie subdivision.	3 "
Nicolet subdivision.	1 "
Campbellton subdivision.	4 "
Moncton subdivision.	12 "
Fredericton subdivision.	4 "
Truro subdivision.	3 "
St. John subdivision.	1 "
Mulgrave subdivision.	6 "
Sydney subdivision.	6 "

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BRIDGES AND CULVERTS.

Chaudière subdivision—

Six wooden box culverts were replaced with concrete pipe culverts.

Ten feet open masonry culvert at Ste. Rosalie Junction extended twenty feet.

Becancour river bridge—

The contract for the new steel spans has been let and the bridge will be finished about the 1st of July. 4 deck plate girder spans 106 feet 8 inches, 98 feet 10½ inches, 103 feet 1½ inches and 100 feet 11½ inches.

Lévis subdivision—

Four masonry wall culverts were replaced with concrete pipe culverts.

Rivière du Loup subdivision—

Eleven wooden box culverts were replaced with concrete pipe culverts.

Rivière du Sud bridge at Montmagny—

A start was made on renewing the eight piers and two abutments of this bridge by railway forces. False work was driven and pier No. 9 torn down and excavation for new pier carried to hard pan. A contract is to be awarded for the balance of the work.

Ste. Flavie Subdivision—

Rivière du Loup Bridge.—Work was started by railway forces extending the three (3) piers and two (2) abutments of the bridge to take a double track bridge. Piers Nos. 1 and 2 have been completed and the work at other points under way.

Nicolet Subdivision—

A new concrete pipe culvert was put in at Mileage 4.5.

Campbellton Subdivision—

Seven (7) open culverts were replaced with concrete pipe culverts.

Moncton Subdivision—

Four (4) wooden stringer bridges replaced with steel beams and new decks. Two wooden stringer bridges renewed.

Brown's Siding.—One new concrete pipe culvert put in.

Fredericton Subdivision—

Mersereau's Brook.—The old bridge has been taken out here and a 12-ft. concrete arch culvert put in and fill over same made and track lifted one foot and the work at this place will be finished about two or three weeks after the frost is out of the ground.

Keenan's Brook.—The old bridge was taken out and a 14-ft. concrete arch put in and fill made over same and track lifted five feet and work will be finished in connection with this crossing in two or three weeks after the frost is out of the ground.

Covered Bridge.—A diversion of line with concrete abutments and steel span to replace present wooden structure is underway and work 70 per cent completed.

Nelson's Hollow Bridge.—Nothing was done here on account of a proposed change in alignment and a new substructure and steel bridge will be put in this year.

Nashwaak River Bridge.—Which consists of two abutments and four piers 3 deck Truss spans and 2 deck girder spans. Contract for substructure was let and about 50 per cent of same is finished. The substructure will be finished about August 1 and the steel spans will be erected this summer. The steel spans for this bridge are being taken out of the main line from places where it was required to put in new spans in order to take the heavy power.

Mileage 3:20.—A wood box culvert was put in for the N. B. Pulp and Paper Co., Limited.

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St. John River Bridge.—Motive power for swing span on St. John river bridge at Fredericton. The contract for supplying engine has been let and engine has been supplied. The installing of this engine will be completed about the 1st of August.

Truro Subdivision—

Four (4) wood stringer spans renewed with steel beams and new decks.

Halifax subdivision—

Four (4) wood stringer spans replaced with concrete pipe culverts.

St. John subdivision—

Five (5) wood stringer spans replaced with concrete pipe culverts.

Point du Chene subdivision—

Five (5) culverts renewed.

Windsor Branch—

One (1) new stringer span renewed with steel beams and new deck.

Mulgrave subdivision—

West River, Antigonish.—Work of replacing wooden trestle approach of above span with concrete substructure and steel spans started by contract work, and work 18 per cent completed.

One (1) wooden wall culvert replaced with concrete pipe culvert

Sydney Subdivision—

Grand Narrows.—New end lift gear installed on swing span bridge.

Stellarton Subdivision—

French River Bridge.—Two (2) piers of this bridge were renewed with concrete from low water mark up, by Railway forces. Three (3) wood wall culverts replaced with concrete rail top culvert.

Oxford Subway.—Twenty-foot through plate girder span with ballast floor. The substructure for steel span is finished and the contract for steel has been let. The work will be finished about the middle of June.

Repairs have been made to the following bridges:—

Sydney Subdivision—

Ottawa brook, Walker's gulch, Leitches' creek, Ball's creek, West Bay road.

Mulgrave Subdivision—

Yankee grant, James river.

Stellarton Subdivision—

Orange brook.

Truro Subdivision—

Folleigh, River Philip, Little Forks.

Moncton Subdivision—

Barnaby river, third crossing; Barnaby river, second crossing; Bartibogue, Nipisiquit, Tete a Gouche, Elm Tree, Belledune.

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Campbellton Subdivision—

Metis, Indian brook, Moffatt's.

The work in connection with the various alterations of thirty spans was completed.

A diver was employed to report on the condition of the substructure of the Mulgrave ferry landing below water.

General inspection has been made of all bridges.

SIGNALS.

Contract has been let for installation of Automatic Block Signals, as follows:—

Halifax Subdivision.—

Halifax to Windsor Junction, 14 miles double track.

Truro Subdivision.—

Painsec Junction to Moncton, 7 miles double track.

St. John Subdivision.—

Hampton to St. John, 20 miles of double track.

Contract about 10 per cent completed.

Contract has been let for the installation of telephone train despatching system from St. John to Halifax. Work about 90 per cent completed.

ELECTRIC CROSSING BELLS.

Electric crossing bells have been installed at 38 (thirty-eight) crossings.

CROSSING GATES.

Crossing gates were installed at Wentworth street, Windsor, N.S., on the Windsor subdivision.

TELEGRAPH LINE.

Construction started on telegraph line, from Ste. Rosalie Junction to Moncton on Great Northwestern Company's poles.

Poles erected for telegraph line, Chatham to Nelson.

ELECTRIC LIGHTING.

Ste. Flavie.—Electric lighting system installed for station platform.

Chatham.—Freight shed wired for electric lighting.

Sussex.—Installation of temporary lights for station platform lighting, on account of new station building.

Moncton.—Wiring extension of freight car repair shop for electric light. Lighting system repaired in Government residence, corner Main and Archibald streets.

Truro.—Lighting system of new passenger station completed. Semaphore wires also installed.

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Halifax.—New motors installed. Motors for shop drive.

Mulgrave.—Shifting semaphore, telephone and electric light wires in yard.

Point Tupper.—New engine house wired and lighting system installed. Government dwelling apartments wired and lighting system installed.

REAL ESTATE.

Land has been expropriated for the following work: Diversion of line from Nelson to Derby Junction; new bridge and change of line at Nashwaak; improvements at Fredericton; Pugwash spur line; ballast pit at Blacklands. During the year 97 leases were prepared.

CONSTRUCTION SURVEYS.

Painsec Junction to Oxford Junction.—On October 15 a location party was placed in the field for the purpose of making a complete right of way and track traverse survey from Amherst to Oxford Junction, and also for the purpose of making surveys covering preliminary information required to ascertain cost of double tracking and reduction of grades to an 0.6 per cent ruling grade in both directions between above points.

On November 17 a second party was placed between Painsec Junction and Amherst for the purpose of obtaining similar information, in regard to existing line, double tracking, and proposed reduction of grades to 0.6 per cent. The preliminary survey work between Painsec Junction and Oxford Junction covering record of existing track, information for cost of double tracking and cost of revision for grade reductions was completed. In addition locations have been placed on the ground for the necessary line changes for an 0.6 per cent grade as follows:—

Revision at Meadow Brook. Revision Dorchester to Sackville. Revision at Amherst. Revision Maccan to Springhill Junction. Complete estimates covering construction cost of grade revisions and double track Painsec junction to Oxford junction are now in course of preparation.

Point Tupper to Sydney.—In June, 1913, a party had been placed in the field in Cape Breton for the purpose of making surveys covering information required for the reduction of grades on the main line from Point Tupper to Sydney to an 0.6 per cent ruling grade in both directions.

Complete preliminary information has been obtained covering cost of reducing grades to 0.6 per cent in Cape Breton, from Point Tupper to Sydney, and estimates are now being prepared.

North Sydney to Leitches Creek.—Various surveys were made in 1913 and a final revision made in the present year, for a line from North Sydney to a junction with the existing main line near Leitches' creek. This location, 4.3 miles in length, has ruling grades of 0.6 per cent in both directions.

About November 1, 1913, a construction party was placed on this work to locate the line and prepare same for construction. Contract was let for construction on January 12, 1914.

New Glasgow to Mulgrave.—A party was placed in the field working from New Glasgow to Mulgrave. This survey is now proceeding. It comprises a track traverse and complete information in regard to existing line for purpose of record. This information is also necessary as a basis for further surveys covering grade reductions.

Painsec Junction to Port Elgin.—A reconnaissance survey is now being made between Painsec Junction and the New Brunswick and Prince Edward Island rail-

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way at Port Elgin, looking to the feasibility of obtaining a line over this route, with the idea of having a short and direct connection with the car ferry terminals at Cape Tormentine. This survey is not yet completed.

STANDARD PLANS.

Thirty (30) standard plans have been prepared for various bridge spans, culverts, etc., and fifty (50) standard plans on buildings, fences, platforms, track material, etc.

C. B. BROWN,
Chief Engineer.

March 31, 1914.

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PRINCE EDWARD ISLAND RAILWAY.

Report of Chief Engineer's Department.

ROAD-BED AND TRACK.

Subdivision or Branch.	TABLE OF MILEAGE.	
	Main Line Miles.	Passing and Other Sidings, Spurs, etc.
Charlottetown.....	116.1	16.2
Souris.....	54.7	3.84
Georgetown.....	24.4	2.87
Cape Traverse.....	11.8	0.98
Murray Harbour.....	47.8	2.32
Elmira.....	9.9	0.93
Montague.....	6.2	0.27
Vernon.....	4.3	0.13
	275.2	27.54

RAILS.

1.1 miles of 56 pound rails were laid in the main line and branches, replacing 50 pound rails and worn out rails of other weights.

TIE RENEWALS.

49,978 track ties were renewed in main and branch lines.

1,326 track ties were renewed in yards and sidings.

22 sets switch ties were renewed.

BALLASTING.

9½ miles of track was ballasted with sand.

2½ miles of track was ballasted with cinders.

NEW TRACKS.

New tracks and extensions were constructed as follows:—

Bloomfield, siding extended 250 feet.

Portage, siding extended 240 feet.

Conway, siding extended 130 feet.

Ellerslie, siding extended 170 feet.

Port Hill, siding extended 300 feet.

New Annan, siding extended 270 feet.

Frederieton, siding extended 170 feet.

Freetown, siding extended 240 feet.

Bradalbane, siding extended 170 feet.

Morell, siding extended 250 feet and spur made into through siding.

Kirkwood, siding extended 200 feet and spur made into through siding.

Grandview, siding extended 200 feet and spur made into through siding.

Village Green, new siding 200 feet long.

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BUILDINGS.

New buildings, platforms, etc., or alterations or additions to existing buildings were constructed during the year, as follows:—

O'Leary.—New station constructed, under contract, at this point.

Blóomfield.—New station platform and stock pen built.

Coleman.—New station platform was built.

McNeill's Mills.—New station platform was built.

Kensington.—New porch built to agent's dwelling.

Cape Traverse.—New station platform.

Sherwood.—New shelter station 12 x 22 feet was constructed, and new platform for same.

Douglas.—New shelter station 10 x 20 feet was constructed with platforms to suit.

In addition to the above, general repairs, as required, were made to all railway buildings and structures.

FENCING.

48,100 lineal feet standard wire fence has been erected.

5,360 lineal feet new permanent snow-fence has been built.

3,400 lineal feet portable snow-fence has been built.

Necessary repairs have been made to other fence.

BRIDGES AND CULVERTS.

The necessary repairs were made to bridges.

Fourteen concrete pipe culverts were installed.

Seven new wooden culverts were built.

Seven stone culverts were repaired.

Forty-four wooden culverts were repaired with timber.

DOCKS AND WHARVES, ETC.

The docks and wharves at Summerside, Georgetown, and Souris were given general repairs, and at Georgetown a new covering of 3-inch deal was placed.

C. B. BROWN,
Chief Engineer.

March 31, 1914.

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INTERCOLONIAL RAILWAY, PRINCE EDWARD ISLAND RAILWAY.
OFFICE OF THE MECHANICAL ACCOUNTANT,

MONCTON, N.B., July 7, 1914.

SIR—I beg to submit the following information for the annual report covering the Intercolonial and Prince Edward Island railways for the fiscal year ended March 31, 1914.

A.—Statement showing the number of locomotives and the different classes of other rolling stock on the line of the Intercolonial railway.

B.—Statement showing the mileage made and the coal, oil, grease and waste consumed by locomotives on the Intercolonial railway.

C.—Statement showing the number of locomotives and the different classes of other rolling stock on the line of the Prince Edward Island railway.

D.—Statement showing the mileage made and the coal, oil, grease and waste consumed by locomotives on the line of the Prince Edward Island railway.

E.—Summary of the principal work done in the shops at Moncton, Halifax and Riviere du Loup for the Intercolonial railway.

F.—Summary of the principal work done in the shops at Charlottetown for the Prince Edward Island railway.

The following rolling stock was purchased for the Intercolonial railway.
On Capital Account.

- 38 Locomotives (9 switching, 4 passenger, 25 freight).
- 3 Sleeping cars.
- 2 Dining cars.
- 5 Colonist cars.
- 2 Combination first class and baggage cars.
- 715 Box cars, steel frame, 60,000 capacity.
- 20 Vans.

On Renewals Account (Revenue).

- 1 Locomotive (freight).
- 2 Postal cars.
- 2 Combination first class passenger and baggage cars.
- 1 Baggage car.
- 8 First class passenger cars.
- 671 Box cars, steel frame, 229, 80,000—442, 60,000 capacity.
- 100 Platform cars, steel underframe, 80,000 capacity.
- 100 Hart convertible dump cars, 80,000 capacity.

The following cars were built in the shops at Moncton on Renewals Account (Revenue).

- 20 Box baggage cars.
- 26 Box cars for carrying Automobiles, 60,000 capacity.
- 9 Vans.
- 1 Flanger.
- Two first class, 2 postal, 1 baggage, 456 box and 100 platform cars purchased, 1 flanger and 9 vans built in the shops replaced the same number condemned.

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The following cars were converted in the shops at Moncton:

Car "Dufferin" from parlour to official, 22 box to stock, 15 box to survey and inspection, and 100 box to platform.

124 box cars 60,000 capacity are on order in the shops on renewals account, and 24 passenger refrigerator cars on capital account.

41 Old small type locomotives were condemned and retired during the year, and were replaced by 15 heavy consolidation type, 14 of which were purchased on renewals account in 1912-13, and 1 in last year, the 41 having a tractive power of 571,415 lbs. as against 632,000 lbs. of the 15.

I have the honour to be, Sir,

Your obedient servant,

J. J. WALKER,
Mechanical Accountant.

G. R. JOUGHINS, Esq.,
Superintendent Rolling Stock,
Canadian Government Railways, Moncton, N.B.

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INTERCOLONIAL

STATEMENT showing the number of Locomotives and the different classes of other

	Locomotives.	Sleeping cars.	Parlour cars.	Dining cars.	Colonist cars.	1st class passenger cars.	2nd class passenger cars.	Postal cars.	Baggage cars.	Box baggage cars.	Air brake instruction cars.	Steam motor cars.	Box cars.	Refrigerator cars.
On hand serviceable and repairing at 31st March, 1913.....	390	45	9	14	54	147	88	36	68	6	1	1	7748	179
To be replaced at 31st March, 1913.....						1	11		1					
Total equipment at 31st March, 1913.....	390	45	9	14	54	148	99	36	69	6	1	1	7748	179
Purchased during the year on capital account.....	38	3		2	5	2		2					715	
Purchased during the year on renewals account in addition to those shown below to replace.....	1					8							215	
Built in the shops at Moncton on renewals account.....									20				26	
Converted in the shops at Moncton from parlour to official car.....			1			1								
Converted in the shops at Moncton from box to stock 13, and from box to survey and inspection, 15.....													28	
Deduct 41 old small type locomotives replaced by 15 heavy modern type, 14 in 1912-13 and 1 this year, the 15 having a tractive power of 632,000 lbs. against 571,415 lbs. of the 41 small type.....	41													
Total equipment at 31st March, 1914.....	388	48	8	16	59	159	99	36	71	26	1	1	8676	179
To be replaced at 31st March, 1913, as above.....						1	11		1					
Condemned and destroyed during the year.....	41					1		2					456	1
Total condemned and destroyed to 31st March, 1914.....	41					2	11	2	1				456	1
Deduct 41 old locomotives as explained above.....	41													
Purchased on renewals account to replace.....						2		2	1				456	
Converted in the shops at Moncton to replace.....														
Rebuilt in the shops at Moncton to replace.....														
To be replaced at 31st March, 1914.....							11							1
Add serviceable and repairing.....	388	48	8	16	59	159	88	36	71	26	1	1	8676	178
Total equipment at 31st March, 1914.....	388	48	8	16	59	159	99	36	71	26	1	1	8676	179

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RAILWAY OF CANADA.

Rolling Stock on the line on the 31st March, 1913, and the 31st March, 1914.

Platform cars.		Pulp wood cars.		Oil tank cars.		Hopper cars.		Gondola cars.		20-ton coal cars.		Hart Otis steel dump cars.		Stock cars.		Hart convertible dump cars.		Auxiliary cars.		Vans.		Store supply cars.		Pintsch gas cars.		Total cars.		Common snow ploughs.		Wing ploughs.		Rotary steam ploughs.		Double track ploughs.		Double end ploughs.		Flangers.		Total ploughs and flangers.		Steam cranes.		Ballast ploughs cars.		Well boring cars.		Ditchers.		Steam derricks.		Steam shovels.		Portable rail sawing and boring machine.		Pile drivers.		Survey and inspection cars.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
3003	49	55	640	5	376	276	163	199	23	110	9	1	1	13297	50	22	2	2	1	40	117	18	2	1	1	3	1	1	

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INTERCOLONIAL RAILWAY OF CANADA.

STATEMENT of mileage, and coal, oil, grease and waste consumed by locomotives for the year ended March 31, 1914.

Months.	Loco- motive mileage.	CONSUMPTION.					AVERAGE CONSUMPTION. per 100 miles				
		Tons of coal.	Pints of valve oil.	Pints of engine oil.	Pounds of wool waste.	Pounds of grease.	Pounds of coal.	Pints of valve oil.	Pints of engine oil.	Pounds of wool waste.	Pounds of grease.
1913.											
April.....	959,793	65,567	16,819	28,830	1,597	4,929	15,302	1.75	3.00	.17	.51
May.....	920,122	60,447	15,072	27,629	1,427	4,964	14,716	1.64	3.00	.15	.53
June.....	885,673	54,041	15,161	25,126	1,258	4,490	13,668	1.71	2.84	.14	.50
July.....	942,248	50,540	14,357	27,942	1,896	5,884	12,015	1.52	2.97	.20	.62
August.....	915,444	52,461	14,212	26,787	1,937	4,645	12,837	1.55	2.92	.21	.50
September.....	849,184	49,506	13,823	26,494	1,545	4,966	13,059	1.63	3.12	.18	.58
October.....	867,250	50,514	12,853	24,731	1,340	5,486	13,047	1.48	2.85	.15	.63
November.....	885,433	52,497	13,654	25,742	1,493	5,586	13,281	1.54	2.90	.17	.63
December.....	924,199	59,121	14,365	27,714	1,359	5,190	14,329	1.55	3.00	.15	.56
1914.											
January.....	867,146	58,098	13,622	28,329	1,524	4,532	15,007	1.58	3.27	.18	.52
February.....	735,547	51,746	11,174	23,447	1,328	3,521	15,757	1.52	3.19	.18	.47
March.....	822,166	53,682	12,530	24,219	1,100	4,776	14,626	1.52	2.95	.13	.58
Total.....	10,574,205	658,220	167,642	316,990	17,804	58,969	13,944	1.58	3.00	.17	.55

J. J. WALKER,
Mechanical Accountant.

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PRINCE EDWARD ISLAND RAILWAY.

STATEMENT showing the number of locomotives and the various classes of other rolling stock on the line on March 31, 1913, and March 31, 1914.

	Locomotives.	1st class passenger cars.	2nd class passenger cars.	Combination 2nd and baggage.	Postal and smoking cars.	Combined postal and baggage.	Baggage cars.	Vans.	Box cars.	Refrigerator.	Stock cars.	Oil tank cars.	Hart convertible cars.	Coal cars.	Platform cars.	Total.	Snow ploughs.	Flangers.	Steam shovel.	Total.
On hand serviceable and repairing March 31, 1913.....	22	19	9	5	4	3	6	3	308	3	28	1	15	12	150	566	10	8	1	19
To be replaced at 31st March, 1913.....	9	4	4	2	...	1	2	1	5	...	...	...	...	...	4	23	1	...	...	1
Total equipment 31st March, 1913.....	31	23	13	7	4	4	8	4	313	3	28	1	15	12	154	589	11	8	1	20
To be replaced at 31st March, 1913, as above.....	9	4	4	2	...	1	2	1	5	...	...	...	...	...	4	23	1	...	...	1
Condemned during the year.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
Total condemned to 31st March, 1914.....	9	4	4	2	...	1	2	1	5	...	...	...	...	...	...	4	24	1	...	1
Rebuilt during the year.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
To be replaced at 31st March, 1914.....	9	4	4	2	...	1	2	1	5	...	...	...	...	...	1	4	24	1	...	1
Add serviceable and repairing.....	22	19	9	5	4	3	6	3	308	3	28	1	15	11	150	565	10	8	1	19
Total equipment, 31st March, 1914.....	31	23	13	7	4	4	8	4	313	3	28	1	15	12	154	589	11	8	1	20

J. J. WALKER,
Mechanical Accountant.

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PRINCE EDWARD ISLAND RAILWAY.

STATEMENT of mileage, and coal, oil, grease and waste consumed by locomotives for the year ended March 31, 1914.

	Locomotive Mileage.	CONSUMPTION.				AVERAGE CONSUMPTION PER 100 MILES.			
		Tons of coal	Pints of valve oil.	Pints of engine oil.	Pounds of waste.	Pounds of coal.	Pints of valve oil.	Pints of engine oil	Pounds of waste.
1913.									
April.....	34,501	889	380	892	635	5,771	1-10	2-58	1-84
May.....	39,417	1,000	392	892	690	5,682	0-99	2-26	1-75
June.....	42,056	1,169	576	1,196	723	6,226	1-30	2-84	1-71
July.....	46,870	1,223	640	1,438	857	5,844	1-36	3-06	1-82
August.....	45,743	1,144	640	1,432	681	5,602	1-39	3-13	1-48
September.....	41,434	1,224	604	1,404	674	6,617	1-45	3-38	1-62
October.....	39,384	1,076	532	1,224	726	6,119	1-35	3-10	1-84
November.....	36,832	1,066	576	1,148	634	6,483	1-56	3-11	1-72
December.....	37,187	1,047	556	1,236	725	6,306	1-49	3-32	1-94
1914.									
January.....	39,731	1,169	620	1,400	574	6,590	1-56	3-52	1-44
February.....	34,842	1,087	588	1,060	440	6,988	1-68	3-04	1-26
March.....	39,783	1,224	648	1,268	638	6,891	1-62	3-18	1-60
Totals.....	477,780	13,318	6,752	14,590	7,997	6,259	1-41	3-04	1-66

J. J. WALKER,
Mechanical Accountant.

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The following work was done in the Locomotive Shops during the year, at Moncton:—

Erecting Shop—

- 42 locomotives were partly rebuilt.
- 76 locomotives received general repairs.
- 20 locomotives received heavy repairs.
- 60 locomotives received light repairs.
- 1 locomotive received specific repairs.

Blacksmith Shop—

- 2,729,025 lbs. iron forgings, including 1,294,845 lbs. bolts, were made.
- 944,561 lbs. steel forgings were made.
- 346,245 lbs. nuts were made.

Pattern Shop—

- 177 cast-iron patterns were made.
- 100 cast-iron patterns were repaired.
- 33 cast-iron patterns were altered.
- 54 patterns were made for steel.
- 45 patterns were repaired for steel.
- 17 patterns were altered for steel.
- 73 brass patterns were made.
- 78 brass patterns were repaired.
- 33 brass patterns were altered.
- 5 patterns were made for malleable.
- 12 patterns were repaired for malleable.
- 4 patterns were altered for malleable.

Brass Foundry—

The following was the output for the year:—

- 495,003 lbs. brass bearings.
- 73,065 lbs. brass castings.
- 56,700 lbs. antimonial lead.
- 22,673 lbs. babbitt metal.
- 420 lbs. metallic packing.

Machine Shop—(Brass turning)—

- 375 air gauges were repaired.
- 200 air hammers were repaired.
- 250 air pumps were repaired.
- 300 lubricators were repaired.
- 500 beading tools were repaired.
- 50 beading tools were made.
- 150 brake cams were made.
- 350 brake cam nuts were made.
- 200 brake cam screws were made.
- 50 bell ringers were made.
- 50 bottle jacks were repaired.
- 24 blow-off cocks were made.
- 300 sets of dies were made.
- 200 cylinder cocks were made.
- 250 engine brasses were made.
- 25 hose couplings were made.

Machine Shop—(Brass turning)—Continued.

- 100 flagstaff castings were made.
- 100 gauge glass cocks were made.
- 300 hydraulic jacks were repaired.
- 300 heater regulators were repaired.
- 600 injectors were repaired.
- 50 injector check valves were made.
- 500 oil cups were made.
- 300 pump governors were repaired.
- 250 reamers were made.
- 50 steam chest release valves were made.
- 25 steam chest nipples were made.
- 75 small tender cocks were made.
- 375 steam gauges were repaired.
- 12 large tender cocks were made.
- 100 taps were made.
- 50 try-cocks were made.
- 300 tube cutters were made.
- 200 wheel defect gauges were made.

In addition to the above, all pump governors, heater regulators, air brake cylinders, engine valves and boiler mountings off all engines and tenders that went through the shops were overhauled and repaired, and a lot of work was also done for outside shops and for the car department.

Machine Shop—(Motion)—

- 3 links were made.
- 233 link pins, blocks and bushes were repaired.
- 1 link hanger was made.
- 231 link hangers were repaired.
- 12 eccentric rods were made.
- 444 eccentric rods were repaired and pins fitted.
- 4 equalizing bars were repaired.
- 127 reversing shafts were trued up and pins and bushes fitted.
- 14 reversing shaft boxes were made.
- 194 reversing shaft boxes were repaired.
- 117 reversing levers were overhauled and pins and bushes fitted.
- 88 reversing lever pawls were repaired.
- 35 reversing lever pawls were made.
- 119 reversing reach rods were repaired and fitted.
- 27 valves were made.
- 162 valves were faced and yokes fitted.
- 111 valve rod keys were made.
- 66 valve stems were fitted on yokes.
- 50 valve heads were faced.
- 73 valve division rings were made.
- 587 valve packings were machined and fitted.
- 69 valve guide boxes were bushed.
- 105 throttle rods were repaired and 29 ends fitted.
- 95 throttle rod glands were bushed.
- 97 throttle levers were fitted with quadrants, springs and pins.
- 285 big end brasses were machined and fitted.
- 39 old big end brasses were machined and fitted.
- 236 small end brasses were machined and fitted.

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Machine Shop— (Motion)—Continued.

- 191 main rod liners were made and fitted.
- 150 big end keys were made.
- 609 side rod bolts were made.
- 243 side rod nuts were made.
- 788 side rod bushes were made and fitted.
- 272 knuckle joint pins were made.
- 316 knuckle joint bushes were made.
- 189 crossheads were trued and keys fitted.
- 172 crosshead pins were made.
- 70 piston rods were machined and keys fitted.
- 146 new rocker box bushes were fitted.
- 8 new rocker box bushes were made.
- 13 old rocker box bushes were fitted.
- 59 old rocker box bushes were relined.
- 361 hub plates were made and applied.
- 275 new driving box brasses were machined and applied.
- 417 old driving box brasses were relined and applied.
- 32 driving boxes were made.
- 704 driving boxes were bored and fitted to axle.
- 36 spring guards machined and applied.
- 93 elvin automatic grease cellars were made and applied.
- 235 eccentric straps were made.
- 215 eccentric straps were rebored and fitted.
- 172 new pulleys were made.
- 78 pulleys were refitted.
- 26 trailer truck brasses were bored and fitted.
- 1 eccentric crank was made.
- 1 starting valve was made.
- 24 eccentric keys were made and fitted.
- 12 snow plough bushes were bored and fitted.
- 4 cap plates were made.
- 6 crane bushes were bored and fitted.
- 33 main rod brasses were machined.
- 2 big end straps were made.
- 5 new intermediate brasses were machined.
- 8 small end wedges were made.
- 78 check plates were made and applied.
- 8 trunnion bushes were made.
- 6 trunnion castings were machined.
- 90 elvin grease spring plates were applied.
- 150 eccentric feathers were machined.
- 100 reversing lever springs were made.

Machine Shop.—

- 357 new driving tires were applied.
- 494 driving tires were turned off.
- 176 engine truck tires were applied.
- 272 engine truck tires were turned.
- 365 new tender tires were applied.
- 543 new car tires were applied.
- 1,549 new car tires were turned.
- 42 trailer truck tires were turned.
- 323 driving journals were trued up.

Machine Shop—Continued.

- 620 hubs were faced.
- 12 cast-iron smoke stacks were machined.
- 300 crossheads were replaned.
- 195 cylinder heads were made.
- 133 old piston heads were turned.
- 81 new piston rods were made.
- 22 equalizing bars were made.
- 161 piston heads were machined.
- 17 cylinder and half saddles were bored and fitted.
- 7 engine truck centre castings were machined.
- 23 driving wheel centres were machined.
- 20 guide bars were made.
- 963 wedges and shoes were made.
- 169 guide blocks were made.
- 7 locomotive frames were made and machined.
- 32 wing castings were machined.
- 16 oil cellars were made.
- 226 driving brake hanger pins were made.
- 16 link blocks were made.
- 9 main rod straps were made.
- 695 driving box brasses were slotted and recessed.
- 849 driving boxes were bored and faced.
- 4 die blocks were made.
- 28 spring equalizing bushes were made.
- 28 cross ties were made.
- 683 driving boxes were planed.
- 200 W.A.B. pins were made.
- 2 trolley wheels were made.
- 94 driving box brasses were made.
- 122 steam chest covers were repaired.
- 110 guide bars were replaned.
- 12 driving boxes were made.
- 7 engine truck frames were assembled.
- 3 dry pipes were made.
- 8 snow plough flanges were made.
- 123 steel wheels were bored for refrigerator cars.
- 16 snow plough bevel gears were made.
- 1 snatch block was made.
- 6 jack presses were made.
- 25 brackets were made.
- 52 grease boxes were made.
- 4 new false valve seats were made.
- 7 new bells were made.
- 94 steel nuts for piston rods were made.
- 72 new fulcrum bushes were made.
- 16 steel coal crane rollers were made.
- 650 pairs tender tires were turned off.
- 4 pairs coal crane wheels were turned.
- 30 brake hangers and nuts were made.
- 9 centre drain castings were machined.
- 20 engine truck axles were applied.
- 11 trailer tires were applied.
- 72 steam chests were replaned.

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Machine Shop—Continued.

- 100 brake hanger pins were made.
- 26 side rods were made.
- 176 spring equalizing beam bushes were made.
- 52 exhaust nozzles and tips were made.
- 35 cylinder head castings were made and machined.
- 280 pop valves were repaired.
- 134 whistles were repaired.
- 24 steam chests were made.
- 39 steam chest covers were made.
- 42 cylinder bushes were bored and fitted.
- 11 foot plates were made.
- 23 centre pin guides were made.
- 38 engine truck boxes were made.
- 140 steel wheels were bored and fitted.
- 25 tender axles were applied.
- 27 driving axles were applied.
- 1 trailer axle was applied.
- 78 car axles were applied.
- 41 smoke box doors and rings were machined.
- 30 crank pins were machined.
- 116 check plates were made.
- 12 crossheads were made.
- 1 engine truck housing was made.
- 10 eccentric cranks were made.
- 14 slide valves were made.
- 11 tube sheets were machined.
- 64 brake hangers were made.
- 1 piston rod was made.
- 13 fire box doors were machined.
- 178 engine truck tires were bored and fitted.
- 1 expansion bracket was made.
- 4 spectacle plates were made.
- 7 cylinders were bushed.
- 20 knowles pumps were repaired.
- 4 air compressors were repaired.
- 7,500 new and second hand axles were turned.
- 973,150 bolts were threaded.
- 307,000 lbs. nuts were tapped and 200,000 lbs. faced.
- 84,100 staybolts were threaded.
- 19,600 turn bolts were threaded.
- 16,807 engine studs were turned and threaded.
- 12,682 chilled wheels were pressed on axles.
- 15,178 chilled wheels were pressed off axles.
- 1,047 wedges were planed.
- 446 new axles were turned and fitted.
- 444 steel tired wheels were pressed on axles.

The air compressor at the Pintsch Gas Plant received general overhauling. The McMiller Coal cranes from Rivière du Loup and Halifax, and the Browning Coal crane from Campbellton went through the shops and received general repairs.

The coal crane at St. John was overhauled.

Repairs were also made to smaller cranes, and to concrete mixers, shovels, etc.

Track Blacksmith Shop—

- 438 frogs were made.
- 162 frogs were repaired.
- 146 spring frogs were repaired.
- 498 split switches were made.
- 213 switch points were repaired.
- 250 switch stands were made.
- 51 switch stands were repaired.
- 79 hand cars were repaired.
- 10 hand cars were made.
- 667 fish plates were made.
- 158 heel castings were finished.
- 34 car stops were made.
- 40 stone drills were made.
- 822 guard rails were made.
- 818 rail cutters were made.
- 544 rail cutters were repaired.
- 158 claw bars were made.
- 102 claw bars were repaired.
- 188 lining bars were made.
- 16 lining bars were repaired.
- 396 drills were made.
- 130 drills were repaired.
- 238 spiking hammers were made.
- 23 spiking hammers were repaired.
- 59 track jacks were repaired.
- 53 track ratchets were repaired.
- 3 diamond crossings were made.
- 1 diamond crossing was repaired.
- 327 chisels were made.
- 171 chisels were repaired.
- 582 switch plates were made.
- 14 eccentric bolts were made.
- 6 eccentric bolts were repaired.
- 62 riveting straps were made.
- 12 pulleys were made.
- 130 gate hooks were made.
- 52 shovel teeth were made.
- 55 staples were made.
- 17 truss rods were made.
- 24 striking hammers were made.
- 2 flanger limbs were made.
- 463 rail braces were made.
- 40 iron knees were made.
- 12 concrete anchors were made.
- 125 pile driver shoes were made.
- 6 motor cars were repaired.
- 9 drilling knees were made.
- 57 curve rods were made.
- 480 switch rods were made.
- 39 ground stands were made.
- 20 ground stands were repaired.
- 8 picks were made.

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Track Blacksmith Shop—Continued.

- 194 picks were repaired.
- 40 picks made in rough.
- 93 rail tongs were made.
- 4 rail tongs were repaired.
- 124 track wrenches were made.
- 23 track wrenches were repaired.
- 23 track gauges were made.
- 12 track gauges were repaired.
- 56 lorries were made.
- 5 axes were repaired.
- 3 axes were made in rough.
- 61 trolley wheels and axles were machined.
- 20 sledges were made.
- 2 spouts were repaired.
- 14 hooks were repaired for Nun-signal.
- 20 hand car wheels were repaired.
- 1 crossing gate was repaired. (Main street).
- 53 double head rods were made.
- 46 double tie rods were made.
- 76 hinge rods were made.
- 323 connecting rods were made.
- 5 rail benders were made.
- 2 rail benders were repaired.
- 2 snow plow platforms were made.
- 11 iron yokes were made.
- 862 jog plates were made.
- 4 adze were made in rough.
- 4 motor cars were repaired.
- 1,575 lbs. screw bolts were made and applied.
- 290 rails were cut.
- 12 rail tongs were made.

The Ballast spreaders, centre plows, ditchers, pile drivers, side plows, and all gear and equipment belonging to this machinery received general repairs.

The Rail sawing machine was repaired and extensive repairs made to the machines in the shop.

Tender Shop—

- 286 valves were repaired.
- 276 valve spindles were repaired.
- 174 running boards were removed.
- 130 running boards were repaired.
- 74 front beams were removed.
- 34 back beams were removed.
- 139 side curtains were finished.
- 151 cab doors were made.
- 363 cab sashes were made.
- 85 covering boards were made.
- 240 cab seats were made.
- 107 headlight bases were made.
- 8 headlight bases were repaired.
- 138 cabs were repaired.
- 59 cabs were made.

Tender Shop--Continued.

- 702 cushions were made.
- 926 hammer handles were made.
- 2,500 sledge handles were made.
- 14 mallets were made.
- 82 switch lamp bottoms were made.
- 51 tool boxes were made.
- 77 tool boxes were repaired.
- 36 wrench handles were made.
- 74 headlight boards were made.
- 13 back castings were made.
- 14 front castings were made.
- 30 buffer castings were made.
- 29 centre castings were made.
- 57 back boards were made.
- 5 step ladders were made.
- 91 fuse racks were made.
- 850 pump laggings were made.
- 96 sand cellars were made.
- 73 back curtains were made.
- 40 overhang boards were made.
- 2 crane houses were made.
- 72 flasks were made.
- 8 plates were made.
- 112 friction blocks were made.
- 14 tender lights were repaired.
- 14 cupboards were made.
- 8 boxes were made.
- 10 steps were made.
- 8 truss rods were made.
- 37 oil boxes were made.
- 1 crane beam was made.
- 16 horses were made.
- 3 bolsters were made.
- 10 benches were repaired.
- 17 benches were made.
- 29 outfit boxes were made.
- 74 outfit boxes were repaired.
- 66 boilers were hooped.
- 5 trucks were made.
- 290 trucks were repaired.
- 14 ladders were repaired.
- 14 ladders were made.
- 50 wheel-barrows were repaired.
- 3 tender frames were made.
- 4 wheel-barrows were made.
- 146 tender frames were repaired.
- 11 quadrants were made.
- 20 valve spindles were made.
- 119 cab floors were laid.
- 119 cab floors were removed.
- 94 covering boards were made.
- 24 spring castings were applied.
- 115 seats were made and applied.

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Tender Shop—Concluded.

- 90 spiral springs were made and applied.
- 34 babbit boxes were made.
- 30 transoms were made.
- 100 tender journal boxes were applied.

Boiler Shop—

- 38,926 stay-bolts were applied.
- 40,739 repaired tubes were applied.
- 16,300 copper furrules were made.
- 6,034 tubes were removed.
- 6,634 tubes were replaced.
- 35,739 tubes were pieced.
- 2,900 stay bolts were made.
- 14,129 tubes were rolled and repaired.
- 1,760 wheels were riveted.
- 268 plates were cut.
- 7,121 tubes were cleaned.
- 990 new tubes were applied.
- 500 scrapers were made.
- 390 ratch bolts were put in.
- 22 new door sheets were made.
- 39 new side sheets were made.
- 20 new tube sheets were made.
- 86 fire-boxes were patched.
- 93 boilers were tested.
- 118 tender frames were repaired.
- 122 stacks were made.
- 85 ash-pans were repaired.
- 39 ash-pans were made.
- 52 tender tanks were repaired.
- 8 smoke boxes were made.
- 9 smoke boxes were repaired.
- 4 mud-rings were welded.
- 18 front ends were removed and renewed.
- 8 steel cabs were repaired.
- 4 long stacks were made.
- 18 brake beams were made.
- 11 heating boilers were repaired.
- 16 coal doors were made.
- 18 coal chutes were made.
- 2 smoke box door rings were made.
- 43 petticoats were made.
- 19 petticoats were repaired.
- 74 coal buckets were made.
- 35 bolsters were made.
- 4 snow ploughs were ironed.
- 15 oil tanks were repaired.
- 1 water service boiler was tested.
- 1 water service boiler was repaired.
- 18 spring boards were repaired.
- 12 spring boards were made.
- 56 bolsters were repaired.
- 84 tender frames were repaired.

Boiler Shop—Continued.

- 76 front ends were applied.
- 1 ash pit box was made.
- 1 coal cart was made.
- 19 shop trucks were repaired.
- 2 fire boxes were made.
- 8 boilers were made.
- 5 binders were made.
- 2 booms were repaired.
- 2 water tanks were made.
- 4 plates for ss. *Scotia* were made.
- 2 dome flanges were made.
- 300 switch plates were made.
- 72 ash-pan slides were made.
- 10 drop stacks were made.
- 1 dope tank was made.
- 20 foot plates were made.
- 150 switch targets were made.
- 1 large bracket for steam shovel was made.
- 20 oil pans were made.

Tin and Copper Shop—

- 11,237 W.A.B. couplings were fitted to new hose.
- 6,326 signal and steam hose couplings were fitted to hose.
- 18,448 bushes were lined.
- 1,934 bushes were relined.
- 509 switch lamps were repaired and painted.
- 145 trail lamps were repaired and painted.
- 76 signal lamps were repaired and painted.
- 38 water cans were made.
- 24 water cans were repaired and painted.
- 372 economy heaters were repaired.
- 82 pumps were lagged.
- 20 ice boxes were made.
- 16 cab lamps were made.
- 42 headlights were repaired.
- 1,700 sheets corrugated roofing were repaired.
- 36 oil cans were made.
- 27 shop lamps were made.
- 31 tank delivery pipes were made.
- 55 tank delivery pipes were repaired.
- 117 drip pans were made.
- 41 water strainers were made.
- 6 steam pipes were made.
- 9 water tanks were lined.
- 404 lubricating plates were made.
- 27 smoke stacks were made.
- 40 gauge glass shields were made.
- 10 stove pipe bases were made.
- 12 vents were made.
- 32 lengths of stove-pipe were made.
- 26 refrigerator cars were relined.
- 3 snow melters were made.
- 10 steam coils were made.

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Tin and Copper Shop—Continued.

- 11 snow ploughs and 8 flangers were piped for air and steam.
- 1 water service car was piped.
- 1 boarding car was equipped.
- 11 chutes were made.
- 12 sinks were made.
- 5 crane pipes were made.
- 90 crane pipes were repaired.
- 2 dope tanks were made.
- 8 drinking tanks were relined.
- 50 car blind tins were made.
- 7 stencils were made.
- 8 copper nozzles were made.
- 350 oil cups were made.
- 14 oil tanks were made.
- 15 passenger car tanks were made and painted.
- 24 ventilators were made.
- 72 corner plates were made.
- 4 copper covers were made.
- 4,050 sets valve steam packing were made.
- 3,000 sets metallic packing were made.
- 100 stove bases were made.

Repairs, alterations and renewals were made to copper pipes of steam pumps and lubricators, copper joints on steam chests, domes and cylinder covers, driving and truck boxes, Westinghouse air brake pipes, removed and replaced all lagging on 199 locomotives.

Equipped tenders with train line pipes for signal and steam lines, and all water pipes overhauled and repaired, where necessary, on 138 tenders.

Fifteen cars for the engineering department were equipped with train line pipes for signal air and steam, and fitted with inside equipment necessary in boarding cars.

Eight vans were equipped with train line pipes for signal air and steam, coal boxes put in, stoves set up, shields put in place, basins applied and closets installed complete.

Repairs were made to wash-basins, taps, closets, lamps, brass work, piping, etc., in 231 passenger, baggage and postal cars, which went through the passenger car repair shop.

A lot of plumbing was done and pipes and fixtures changed in car "Dufferin," which was converted to an official car.

Repairs were made to wash-basins, taps, closets, lamps, brass work, piping, etc., in 80 parlour, sleeping and dining cars and two official cars.

Repairs were made to wash-basins, closets, lamps, piping, etc., in 25 vans.

Extensive repairs were made to the elevator, heaters and plumbing in the general office building at Moncton. Repairs were also made in the railway cottages at Moncton, car cleaning building, Moncton station and rest room, and car mileage office, new shops, offices, freight shed, pintsch gas plant, Norton station, Moncton roundhouse, St. John freight house, Truro station, Sackville station, Amherst station, Oxford Junction station, Painsec Junction station, Sussex station, Springhill Junction station, restaurant at Moncton station, old mechanical offices, engineer's lobby at roundhouse, Millerton station, yard office Moncton station, and Campbellton station.

Stoves and pipes were repaired and furnaces put in condition in the different stations between St. John and Halifax, Loggieville and Fredericton, Dartmouth branch, Indiantown and Dalhousie branches, Moncton and Campbellton.

Electrical Department—

- 1,769 extension cords were repaired.
- 319 extension cords were made.
- 1,333 incandescent lamps were removed.
- 39 locomotive cabs were repiped and wired.
- 133 armatures were rewound.
- 70 headlights examined and repaired.
- 72 cab lamps were repaired.
- 35 armatures were repaired.
- 54 field coils were repaired and rewound.
- 25 desk lamp stands were made.
- 5 cranes were repaired.
- 216 starters were overhauled and repaired.
- 45 drop lamps were installed.
- 17 motors of cars were repaired.
- 17 electric bell systems were repaired.
- 4 electric drills were repaired.
- 1 electric motor for valve setter was installed.
- 276 motors were cleaned and oiled.
- 304 motor bushes were renewed.
- 2 electric hoists were repaired.
- 47 circuit breaker switches were repaired.
- 100 new switches were applied.
- 106 cooper Hewit lamps were repaired.
- 49 benches were piped and wired.
- 46 clusters were installed.
- 4 stationary boilers were wired.
- 80 motors examined and repaired.
- 16 motors were installed.
- 151 lighting systems on engines were tested.
- 2 transformers were installed.
- 1 booster was installed.
- 1 exciter was overhauled and repaired.

The starter on the bolt machine in the blacksmith shop was removed, repaired, tested and reapplied.

All pipes in duct were altered, repaired where necessary and painted. This was owing to the old line having to be changed on account of the freight car repair shop extension.

All electric wiring in car department was overhauled and repaired and a number of new extensions run.

New crossarms were applied to all poles in the Moncton yard and a number of new ones put up between the shops.

Switches were renewed in all cabinet boxes at new shops.

Lamps, hangers and brackets on all outside lamps were examined and all lamps renewed and brackets painted.

The gas meter room was wired and line run from the blacksmith shop. Three stationary hangers were installed and one extension cord.

All exposed wires about shop were painted. Switch boards were repaired.

The old wires or the wiring in the Moncton roundhouse was repaired.

The vacuum cleaner at the general offices was overhauled and repaired.

Electric bells were installed between the office of the superintendent rolling stock and the master car builder's office, and electric lights were replaced and hangers changed. Electric bells in the mechanical offices were overhauled and repaired.

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Blue print machine in the draughting office was overhauled and repaired twice during the year.

The Bettington boiler was wired for gauges and indicators.

Crossarms were put up, and eight electric lines were installed in the new freight car shop. All hangers necessary with extension and all fittings were made complete. Time-keeper's office was equipped with additional lights and the old system overhauled and repaired.

The electric lighting system in official car No. 28 was examined and repaired.

The regulator in car "Stadacona" was repaired and adjusted.

Special Work—

A Bettington boiler with all pipe connections and motors was installed complete in the power-house at Moncton.

Piping was put in the new freight car repair shop extension for water service, and for air and electric wire line.

The wiring was completed in the freight car repair shop extension with all necessary extensions, switches, lamps, etc., and a steam pipe line was run to this shop.

The gas burners were removed from the boilers in the power-house, and the boilers fitted to again burn coal.

The gas producer plant was extensively repaired, also the furnaces and compressors.

The bull-dozer in the blacksmith shop received a general repair. The steam hammer and all other machines in this shop were overhauled and repaired where necessary.

Yard crane No. 15 received a general overhauling and a renewal of parts.

All machines in the machine shop were examined and repaired and kept in good working order.

The tanks at the pintsch gas plant were repaired and tested.

The boilers in the power-house were tested and a number of tubes were renewed.

The machinery in the passenger and freight car shops was overhauled and repaired and kept in good working condition.

The radiators in the stores and offices building were cleaned and repaired, and the piping overhauled and renewed where necessary.

The gas engines and the air compressor in engine room were overhauled and repaired.

The air line from the power-house was tested and leaky joints repaired. Valves on the air line were also renewed where necessary.

Three boilers of old locomotives sold were repaired.

Three iron racks were made for the shops to be used for storing journal boxes.

Large water tanks from Rivière du Loup were repaired, tested and returned.

An old tank which was removed from one of the motor cars was remodelled for water test purposes.

Three old boilers were repaired to be used for heating purposes at the River du Sud bridge.

An air hoist for Stellarton was rebuilt.

The gas holders at the gas producer plant were repaired.

A feed water heater repaired for St. John.

The boiler at the planing mill was repaired and tested.

The boilers in the boiler room were painted.

The boiler room was also painted and alterations were made in the steam line in the stores building.

The steam pipes and heating system in all the shops were repaired.

The air hoist for loading wheels was thoroughly overhauled.

The air compressor in the roundhouse at Moncton received a general repair.

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Stoker parts were all examined and worn parts were renewed.

The hydraulagraph in the machine shop was repaired.

Two large testing tanks were built and tested.

The gas burners and connections were removed from the boilers in the track blacksmith shop and pintsch gas plant and stored, and the boilers fitted for burning coal.

An extension of 400 feet was made to the freight car repair shop at Moncton, and the work completed.

The following new machinery was installed in the Moncton shops: 5 air hammers, 10 air drills, 1-16 inch lathe.

The following work was done in the car shops during the year at Moncton:—

9 vans and 1 flanger were rebuilt.

26 box cars for carrying automobiles were built.

20 box baggage cars were built.

22 box cars were converted into stock cars.

15 box cars were converted into survey and inspection cars.

Parlour car "Dufferin" was converted into an official car.

100 box cars were converted into flat cars.

14,580 freight and 545 passenger cars were turned out of the shops at Moncton repaired.

950 freight and 134 passenger cars were equipped with United States Safety appliances in compliance with instructions of the Interstate Commerce Commission.

596 F-36 triple valves were removed from freight cars and K-1 applied.

144 passenger cars were equipped with fire extinguishers.

The work of fitting passenger cars with emergency tool boxes was completed.

The following special work was commenced and is progressing:—

Installing the Bohn syphon refrigerator in 6 dining cars.

Changing the folding wash basins to one continuous nickeline washstand in four sleeping cars.

Changing marble washstand and dry hoppers to nickeline washstands and Duner flush closets in five parlour cars.

Changing bracket lamps in dining cars from upright to turn down brackets.

The following rolling stock received general repairs:—

879 freight cars.

1 tool car.

43 ploughs.

7 baggage.

3 colonist.

5 postal.

1 dining.

31 vans.

17 flangers.

3 auxiliary.

10 first class.

5 sleeping.

9 second class.

1 official.

The following cars received ordinary repairs:—

864 freight.

2 boarding cars.

7 dining.

10 parlour.

14 second class.

20 baggage.

1 official.

24 vans.

1 store.

21 sleeping.

80 first class.

30 colonist.

11 postal.

1 combination.

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The following cars received minor repairs:—

25 sleeping.	122 first class.
48 colonist.	55 second class.
22 baggage.	5 dining.
14 postal.	16 official.
2 parlour.	3 bridge cars.
60 vans.	1 auxiliary.
12,651 freight cars.	

The following cars were burnt off, primed, filled, rubbed, coated, lettered and varnished:—

14 sleeping,	8 first class,
5 dining,	4 second class,
6 parlour,	1 colonist.

The following cars cleaned, cut in, and varnished:—

12 sleeping,	2 dining,
3 parlour,	78 first class,
22 second class,	30 colonist
15 postal,	26 baggage,
3 official,	1 auxiliary.

The following rolling stock painted, lettered and varnished:—

32 vans,	14 refrigerator,
7 snowploughs,	4 flangers,
18 boarding cars,	1 steam shovel,
357 box cars,	181 flat cars,
4 ash cars,	12 Hart-convertible cars,
15 Hart-Otis steel dump cars,	14 stock cars.
3 tank cars,	2 box baggage cars,
3,739 freight cars relettered and touched up.	167 engines and tenders were painted, lettered and varnished.

A number of freight trucks, baggage trucks, window sashes, doors, safes, desks, ladders, chairs, stepping boxes, tool and outfit boxes, wheel barrows, sign boards, gangways, smokestacks, and several smaller articles were painted and lettered.

Cabinet Shop—

The following articles were made:—

3 office railings and gates,	1 baggage skid,
13 sliding boards,	3 battery boxes,
1 emergency stretcher and box,	75 picture and mirror frames,
4 timekeepers' boxes,	12 switch connection boxes,
11 outfit boxes,	18 candle holders,
2 meat boards,	13 seat divisions, bottoms and backs,
28 sign boards,	4 tool chests,
147 car window sashes,	25 step ladders,
8 desk sashes,	4 letter racks,
2 car berths,	18 office desks, flat tops,

Cabinet Shop—Continued.

2 office desks, roll tops,	4 large wardrobes,
22 tables,	9 large filing cases,
60 car doors,	15 dry car hoppers,
2 screen doors and frames for official cars,	2 cupboards for official car,
1 press stand,	1 large folding table,
2 cabinets,	2 black boards,
57 window sashes,	4 large office glass partitions 200 lights,
129 hammer and brush handles,	7 desk drawers,
2 car gates,	78 ballast boxes,
7 small nests of drawers,	14 wash basin fronts for cars,
24 shelves,	8 partitions for general offices,
49 steam regulation notices framed and glazed,	7 large drawing tables,
1 art sash,	7 large vault cases for general offices,
17 packing boxes,	13 wind shields,
11 large work benches,	27 winnow screens,
40 inlaid panels,	17 end panels,
21 stools,	32 head boards,
9 office doors,	6 office door frames,
1 large case for Comptroller's office,	2 plaster hocks,
3 closet doors,	1 sliding window sash,
3 partitions in mail car,	1 flag pole,
	2 screens,
	2 garbage boxes.

In addition to the above a number of small articles were manufactured, such as watchman's clock key boxes, towel rollers, office directory boards, train bulletin boards, office chair bottoms, drawers, trays, knife boxes, holders, ink stand bottoms and various small articles.

The following articles were repaired:—

60 chairs,	4 seat ends,
75 car doors,	4 reversible tables,
22 ordinary tables,	2 blue print tanks,
61 window sashes,	19 office doors,
10 desks,	4 filing cases,
4 nests of drawers,	10 head boards,
1 wardrobe,	10 sliding doors,
4 end panels,	1 large blue print rack,
4 letter head cases,	1 hose cart wheel,
6 advertising frames,	1 small bureau.
1 travelling ladder for general office	

A lot of work was also done repairing clothes closets, office stools, door checks, general manager's house, traffic manager's house, general superintendent's house, Moncton station restaurant and new wing of general offices.

Freight car repair shop—(In addition to the ordinary repairs.)

- 589 new roofs were applied to freight cars.
- 189 cars were equipped with Acme levers.
- 42 new freight car trucks were built.
- 1 Sterlingworth truck was re-enforced.
- 1 snow plough was equipped with Westinghouse air brake.
- 3 snow ploughs were equipped with M.C.B. couplers.
- 6 box cars were lined for carrying potatoes.

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The following work was done in the Upholstering Shop:—

Heavy repairs consisting of renewals, upholstering, carpets, mattresses, blinds and general cleaning in the following cars:

7 dining,	8 sleeping,
13 colonist,	2 parlour,
1 official,	10 first class.

Medium repairs were made to seats and backs, floors and interior washed, mattresses, seats and backs and carpets vacuum cleaned, and parts of seats and backs and blinds renewed in the following cars:—

2 sleeping,	1 dining,
4 parlour,	1 official.

Light repairs were made to seats and backs, mattresses, carpets and wicker chairs were repaired and patched in the following cars:—

51 first class,	20 colonist,
1 dining,	1 parlour,
9 sleeping,	2 official.

225 mattresses and pillows were made.

192 van cushions and seat backs were made.

120 water hose bags were made.

800 cab seats and backs were made.

1,037 engine curtains were made.

Repairs were also made to the upholstering of office chairs, office desks were covered with morrocoline, copper steam pipes were lagged with asbestos, vestibule dust curtains were repaired, window lifts were covered with plush, stepping boxes and small stepping ladders re-covered with plush, office stools were upholstered, chairs were re-covered with leather and plush, sleeping car portiers and mattresses were repaired and a number of smaller jobs were done.

The following material was manufactured on the wood-working mill:—

511 brake beams.	1,116 buffer blocks.
1,300 draft timbers.	390 truck sides.
355 truck bolsters.	338 spring boards.
73 pilots.	
4,008,044 feet of lumber milled.	

1,882 shops orders were completed and delivered to Stores Department.

Rivière du Loup Shops—

The following regular work was done during the year:—

42 locomotives received general, 1 heavy, 12 light and 32 specific repairs

1,873 new boiler tubes were applied.

9,128 boiler tubes were pieced.

46 fire boxes were patched.

108 boilers were tested.

143 pairs driving tires were turned off.

49 pairs engine truck tires were turned off.

172 pairs tender truck tires were turned off.

4 new trailing wheels were applied.

1 new engine truck was applied.

1 cab was made.

Rivière du Loup Shops—Continued.

- 26 pilots were made.
- 1 tender frame was made.
- 18,679 bolts were forged.
- 91,052 bolts were screwed.
- 13,302 studs were screwed.
- 46 engines and tenders were painted.
- 51,784 lbs. brass castings were made.
- 3,040 sets metallic piston rod packing were made.
- 5,767 sets metallic valve stem packing were made.
- 49,258 lbs. iron forgings were made.
- 455 driving springs were repaired.
- 95 engine truck springs were repaired.
- 97 tender truck springs were repaired.
- 16 new engine truck springs were made.
- 29 new driving springs were made.

A large number of cars were given light repairs, and various jobs were done for other departments of the railway.

Halifax Shops—

The following regular work was done during the year:—

- 6 locomotives received light repairs.
- 40 locomotives received specific repairs.
- 712 new boiler tubes were applied.
- 3 fire boxes were patched.
- 18 boilers were tested.
- 5 driving tires were turned off.
- 4 engine truck tires were turned off.
- 8 tender truck tires were turned off.
- 2 new main rods were applied.
- 2 new side rods were applied.
- 5 new pilots were made.
- 10,880 bolts were forged.
- 13,650 bolts were screwed.
- 1,340 studs were screwed.
- 11 engines and tenders were painted.
- 100 sets metallic piston rod packing were made.
- 40 sets metallic valve stem packing were made.

The following new machinery was installed:—

- 1 42-inch car wheel lathe with motor and hoist.
- 1 42-inch car wheel boring machine with motor and hoist.
- 1 double-axle lathe with motor and hoist.
- 1 48-inch car wheel press, with motor and hoist, with tracks, trucks, cranes, etc.
- 1 tool grinder.

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PRINCE EDWARD ISLAND RAILWAY.

The following is a summary of the principal work performed at the shops of the Prince Edward Island Railway at Charlottetown:—

Locomotive Shops—

Thirteen locomotives received thorough general repairs.

Eleven locomotives received side and main rod brasses.

All the motion and running gear thoroughly examined, staybolts in boilers thoroughly examined, and five hundred and sixteen new staybolts put in boilers.

Sixty locomotives received specific repairs.

Eight locomotives received new pistons and twelve piston rods.

Six tender tanks and six tender frames were largely rebuilt.

Three foreboxes were patched.

Six crossheads were made and twelve were tinned and planed, three engine frames were rewelded.

The following new parts were supplied:—

Twenty truck boxes, twelve driving boxes, six whistles, thirteen pops, twenty pop valves, twenty-four valve stems, twenty slide valves, three hundred and seventy-five sets metallic packing, twenty cylinder cocks, four blow-off cocks, forty punches, six smoke stacks, one hundred and twenty-five truck straps, six truck bolsters, forty brass valve spindles, ten valve yokes, four bell ringers, twenty check valves, twenty-four taps, eight crank pins, twenty injector spindles, six steam pipes, six throttle glands and valves, thirty engine springs, and one driving axle.

One hoisting engine fitted out and thirty injectors repaired.

Seventy-five oil cups, twenty grease cups, twenty piston rod oil cups, twelve slush boxes, twenty-four slide blocks, twenty-six air pump cylinders, sixty brake levers, twenty-five brake jaws, four hundred and fifty brake pins and two hundred and fifty brake bolts were bored and fitted out.

Thirty-four sets driving wheels, thirty sets truck wheels, one hundred and twenty sets steel wheels, and ninety new axles were turned off. One hundred and ten sets wheels were pressed on axles. Five hundred and twenty-six new tubes were welded and put in boilers. Seventy thousand pounds of iron and four thousand, one hundred and fifty-one pounds of steel were forged; four thousand, one hundred and sixty pounds of nuts were tapped, and a great deal of running repairs too numerous to mention.

Car Shops—

Five box cars, five flat cars, one stock car, one snow plough and two engine cabs were repaired and charged to revenue.

The following received heavy repairs:—

Twenty-seven first class cars, fourteen second class cars, ten postal and baggage cars, one hundred and fifty-one box cars, thirty-five flat cars, five snow ploughs, four flangers and one van.

The following received light repairs:—

Fourteen first class cars, seventeen second class cars, thirteen postal and baggage cars, thirty-eight box cars, seventy-three flat cars, one snow plough and four flangers.

Nine cars were resheathed.

Ninety-six oil boxes, twenty-eight brake spindlers, twenty-three brake beams, twenty-four sashes, twenty-eight doors, twenty-six truck frames, thirty-eight truck

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bolsters, ten buffers, five hundred and twenty car frictions, twenty-seven sets car housings and five hundred and forty car castings were made. One hundred and forty-eight wheels, forty-eight new roofs and thirty-four new floors were put on cars.

Brass Foundry—

Output, 16,890 pounds of brass castings.

Copper Shop—

Forty headlights, thirty-five discharge pipes, ten copper pipes, six elevator pipes, four oil pipes, four injector pipes, twenty-nine train lamps, fifteen station lamps, twelve passenger car lamps, three semaphore lamps, two conductor's lamps, four tank spouts, one pump, four car baskets, one hundred and ninety oil cans and forty-five water cans were repaired.

Ninety engine truck funnels, twenty-six wire joints for steam chests, nineteen water glass shields, three feed pipes, four sand pipes, two oil pipes, two smoke stacks, and two zinc boxes for machine shop were made.

Lead lined forty car bearings and zinc lined seven ice boxes.

Twenty driving boxes, forty truck boxes and four truck brasses were babbitted.

Twelve crossheads and eleven sets rod brasses were tinned.

Copper pipe on fifteen engines softened and examined.

Repaired lagging on eighteen boilers and piped from injectors to ashpan in twenty-two engines.

Paint Shop—

Eleven locomotives were painted and varnished.

Sixteen first class cars were cleaned and eleven varnished, three postal and baggage cars were painted, eight cleaned and eight varnished; two second class cars were painted, seven cleaned and seven varnished, forty-five box cars were painted; one hundred and thirty-five box car roofs were painted; thirty-five flat cars, eight snow ploughs, four flangers, twenty-three hand cars, one refrigerator car, one oil tank, twenty-five water cans, seventeen loading platforms, sixty track levels, thirteen outside sashes and eight flag poles were painted. Eight sets outside sashes varnished; three desks, one table and four ticket cases filled and varnished; twenty-nine settees, four tables, fourteen seats, four letter cases, four ticket cases and four desks stained and varnished. Two stations, two offices and Charlottetown station roof painted.

Thirteen sashes glazed, forty-seven sign boards lettered, ninety box cars relettered and three hundred and thirty-six panes of glass put in buildings.

Work done for the road and traffic departments:—

Thirty loading platforms, eleven freight trucks, one coal hoist, seven cattle loaders, three sheep loaders, three baggage trucks, thirteen coal boxes, six storage boxes, three clothes boxes, three tool boxes, thirty-two doors, thirteen sign boards, two bill boards, three lamp stands, two grind stone stands, four tables, one telegraph table, four ticker cases, four book cases, four desks, twenty-nine settees, two wheelbarrows, fourteen track levels, twelve switch targets, three ladders, one hundred pocket staples, three posthole diggers, six hundred rail braces, twenty-four gate hinges, forty-seven cold chisels, forty picks, five switches, sixty switch rods, sixteen switch headers, twenty switch cranks, thirty pairs fish plates, fourteen frogs, thirty-two clawbars, seven push cars, eight windows and sashes, and seven drawers were made.

Eight hand cars were rebuilt. Air compressor thoroughly repaired.

One hand truck, seven freight trucks, four baggage trucks, four hand cars, seven trollies, eight doors, eighty picks, twelve clawbars, sixteen switch cranks and one turntable were repaired.

The steam shovel was repaired. New tubes were put in boiler, and engine and dipper repaired.

SESSIONAL PAPER No. 20

GOVERNMENT RAILWAYS.

LEGAL AND CLAIMS DEPARTMENT.

MONCTON, N.B., July 13, 1914.

SIR,—The legal and claims department of the government railways is of recent organization and the records date from January 1 last past; I have therefore the honour to submit herewith my report on the said department for the period from the 1st day of January last past to the end of the fiscal year, namely, March 31, 1914.

Prior to the organization of this department the legal and claims work was conducted between the head office of the railway at Moncton, New Brunswick, and the Department of Railways and Canals at Ottawa, but under the present system all such work is now conducted at the head office of the railway and with a result of bringing the various departments in close communication in respect of such work and to the general advantage of all such departments.

Complete records of railway documents and all other railway legal data and of all claims for and against the railway are being compiled to date and will thereafter be supplemented under a modern system of filing and registration.

Legal documents are prepared in the department of claims disposed of in immediate communication with the various officials of the departments concerned.

I enclose herewith tabulated statements of legal documents entered into by the railway within the period covered as aforesaid:—

(1) Contracts and agreements entered into by the Intercolonial Railway and Prince Edward Island Railway.

(2) Property leased by the Intercolonial Railway and Prince Edward Island Railway.

(3) Property leased to the Intercolonial Railway and Prince Edward Island Railway.

(4) Property conveyed to the Intercolonial Railway and Prince Edward Island Railway.

Within the period covered by this report claims (other than traffic department claims) filed against the railway in the aggregate of \$24,963.21 have been settled in the total for \$15,775.64, all of which settlements have been effected upon a reasonable basis and with as prompt despatch as the cases would permit covering claims outstanding on January 1 last and claims between said date and March 31 as aforesaid.

The above is respectfully submitted.

Yours truly,

H. F. ALWARD.

F. P. GUTELIUS, Esq.,
General Manager,
Government Railways,
Moncton, N.B.

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CONTRACTS AND AGREEMENTS entered into by Intercolonial Railway and Prince Edward Island Railway from January 1 to March 31, 1914.

Number.	Date.	Contractor.	Description.
1914.			
7112	Jan. 8.	K. A. Morrison.....	Construction of substructure of a bridge over brook near Covered Bridge Station, N.B.
7113	" 8.	Dominion Bridge Company, Limited.	Erection of following bridges—Becancour River, crossing over N.T.R., Rivière du Sud bridge, Rivière du Loup bridge.
7114	" 8.	Baird & Howie.....	Construction of substructure of a bridge over Nashwaak River.
7115	" 20.	Hall Switch & Sig. Co., Limited....	Installation of a telephone train despatching line between Moncton and St. John, N.B.
7116	" 22.	McDonald & McIntosh.....	Construction of substructure of a bridge over West River at Antigonish, N.S.
7117	Feb. 6.	Union Construction Co., Limited....	Construction of a line of railway from point on I.C.R. at No. Sydney Station to a junction with main line of railway near Leitches Creek Station, N.S.
7264	" 6.	Canadian Allis-Chalmers, Limited..	Manufacture and erection of steel railway bridge at West River Antigonish, N.S., Barney's River and French River.
7118	" 6.	MacKinnon, Holmes & Company, Limited.	Manufacture and delivery of steel railway bridges at Rivière le Bras, Black River, Bridge 2.8 miles W. of Sayabec, under crossing Ivory Rd. and Oxford Subway.
7308	Mar. 12.	Kennedy & Co.....	Erection of a passenger station at O'Leary, P.E.I.
7119	" 12.	Dominion Bridge Company, Limited.	Erection of 5 bridges on Dartmouth to Deans Branch at following points—McNab's Brook, Marsh Brook, Head of Chezzetcook, Gaetz Brook, and Petpeswick.
7247	" 12.	Northern Electric & Mfg. Co., Ltd..	Installation of a telephone train despatching line between Moncton, N.B., and Truro, N.S.
7120	" 14.	The Nova Scotia Car Works, Limited.	Construction of 20 standard caboose cars.
7217	" 26.	Coldbrook Water Company.....	Supply of water at Coldbrook, N.B.
7229	" 27.	Sir W. G. Armstrong Whitworth & Co., Limited.	Construction and delivery of a steel double screw ferry steamer.
7406	Jan. 28.	Timothy Foley, Michael H. Foley, Patrick Welch, John W. Stewart and Gilbert E. Fauquier.	Halifax Ocean Terminals Docks (First Unit) Contract No. 3.

H. F. ALWARD,
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PROPERTY LEASED to Intercolonial and Prince Edward Island Railways between January 1 and March 31, 1914.

Number of Lease.	Date of Signature.	Lessor.	Land or rights demised.	Area.	Term.	Commencement of term.
	1914.					
7210	Jan. 29	City of St. John, N.B.	Granting privilege to extend one spur track from railway on Ballast Wharf in City of St. John, N.B., along Charlotte Street to Broad Street.		To be cancelled upon 60 days' notice.	Jan. 29, 1914.
7296	Mar. 11	"	Granting privilege to extend one spur track of Intercolonial Railway to St. John Iron Works from branch running to James Pender & Co's siding.		To be cancelled upon 60 days' notice.	Mar. 11, 1914.

*No property leased to Prince Edward Island Ry.

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Island Railways between January 1 and March 31, 1914.

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual-rental.	Due each year.	First install- ment due.
			\$ cts.		
6,482 sq. ft.	During pleasure.	Jan. 1, 1914	1 00	Jan. 1...	Jan. 1, 1914.
4,842 sq. ft.	"	" 1, 1914.	1 00	" 1...	" 1, 1914.
		" 1, 1914.	1 00	" 1...	" 1, 1914.
1.2 acres.	"	" 1, 1914.	5 00	" 1...	" 1, 1914.
2,139 sq. ft.	"	" 1, 1914.	1 00	" 1...	" 1, 1914.
		" 1, 1914.	1 00	" 1...	" 1, 1914.
	5 years.	" 15, 1914.	1,750 00	(Jan. 15) April 15 July 15 Oct. 15	" 15, 1914.
4,948 sq. ft.	During pleasure.	Dec. 1, 1913.	10 00	Dec. 1...	Dec. 1, 1913.
	"	Jan. 1, 1914.	1 00	July 1...	July 1, 1914.
10,000 sq. ft.	"	Dec. 31, 1913.	5 00	Dec. 31...	Dec. 31, 1913.
	"	Jan. 1, 1914.	1 00	Jan. 1...	Jan. 1, 1914.
3,930 sq. ft.	"	Feb. 1, 1914.	1 00	Feb. 1...	Feb. 1, 1914.
$\frac{1}{2}$ acre.	"	" 1, 1914.	5 00	" 1...	" 1, 1914.
6,075 sq. ft.	"	Mar. 6, 1913.	5 00	Mar. 6...	Mar. 6, 1914.
1.20 acres.	"	" 6, 1913.	50 00	" 6...	" 6, 1914.
4,750 sq. ft.	"	Feb. 1, 1914.	5 00	Feb. 1...	Feb. 1, 1913.
	"	" 1, 1914.	1 00	" 1...	" 1, 1914.
	"	" 1, 1914.	1 00	" 1...	" 1, 1914.
450 sq. ft.	"	" 1, 1914.	1 00	" 1...	" 1, 1914.
1,752 sq. ft.	"	Mar. 1, 1914.	1 00	Mar. 1...	" 1, 1913.
4,740 sq. ft.	"	" 1, 1914.	1 00	" 1...	" 1, 1914.
	"	" 1, 1914.	1 00	" 1...	" 1, 1914.
16,428 sq. ft.	"	" 1, 1914.	10 00	" 1...	" 1, 1914.
1,150 sq. ft.	"	Feb. 1, 1914.	5 00	Feb. 1...	Feb. 1, 1914.
	"	Mar. 1, 1914.	1 00	Mar. 1...	Mar. 1, 1914.
3,000 sq. ft.	"	" 1, 1914.	1 00	" 1...	" 1, 1914.
	"	" 1, 1914.	1 00	" 1...	" 1, 1914.
	"	" 1, 1914.	1 00	" 1...	" 1, 1914.
	"	" 1, 1914.	1 00	" 1...	" 1, 1914.
2.07 acres.	"	Jan. 1, 1913.	10 00	Jan. 1...	Jan. 1, 1913.
144 sq. ft.	"	Mar. 1, 1914.	1 00	Mar. 1...	Mar. 1, 1914.
	"	" 1, 1914.	1 00	" 1...	" 1, 1914.
8,147 sq. ft.	"	July 1, 1913.	5 00	July 1...	July 1, 1913.
	"	April 1, 1914.	1 00	April 1...	April 1, 1914.
100 sq. ft.	"	" 1, 1914.	2 00	" 1...	" 1, 1914.
90,675 sq. ft.	"	" 1, 1914.	1 00	" 1...	" 1, 1914.
1,767 sq. ft.	"	" 1, 1914.	2 00	" 1...	" 1, 1914.
11.07 acres.	"	" 1, 1914.	50 00	" 1...	" 1, 1914.
300 sq. ft.	"	Jan. 22, 1914.	1 00	Jan. 22...	Jan. 22, 1914.
1,050 sq. ft.	"	Mar. 1, 1914.	5 00	Mar. 1...	Mar. 1, 1914.

H. F. ALWARD,
General Solicitor.

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PROPERTY CONVEYED to the Department of Railways
INTERCOLONIAL

Number of Deed.	Date of Deed.	Grantor.	Lot.
	1914.		
7175	Jan. 2.	James Bambrick <i>et ux.</i>	Land at.....
7176	" 2.	Thomas Rourke <i>et ux.</i>	"
7177	" 3.	John Gilbert.....	"
7411	Feb. 12.	Samuel Hiltz <i>et ux.</i>	"
7412	" 24.	Ida Blanche McKenzie.....	"
7413	Jan. 31.	Harvey E. Cole <i>et ux.</i>	"
7414	Feb. 3.	Isaac G. Leslie <i>et ux.</i>	"
7415	Jan. 24.	Alexander Nieforth <i>et ux.</i>	"
7416	" 2.	Rufus Gould <i>et ux.</i>	"
7417	" 3.	Mary Horton <i>et al.</i>	"
7418	" 6.	Arthur Fisher <i>et ux.</i>	"
7419	" 9.	Matthew G. Archibald <i>et ux.</i>	"
7420	Mar. 26.	Peter G. Archibald <i>et ux.</i>	"
7421	Feb. 19.	John H. Sedgewick <i>et ux.</i>	"
7422	" 12.	William Naugle <i>et ux.</i>	"
7423	" 3.	D. Archibald Hutchinson <i>et al.</i>	"
7424	" 27.	Stanley C. W. Tait <i>et al.</i>	"
7425	Mar. 19.	Duncan Slade.....	"
7426	" 19.	Daniel W. B. Reid <i>et ux.</i>	Of all that portion of a right of way to pass and repass from the Main Post Road at Elmsvale unto D. W. B. Reid's land.
7427	" 19.	Joseph Day <i>et ux.</i>	Land at.....
7428	Jan. 31.	John G. Bissett.....	"
7429	" 31.	Freeman Brown <i>et ux.</i>	"
7273	" 2.	Isaiah Crittenden.....	Water lot at Pirate Cove.....
7430	Feb. 25.	Robert J. Thompson <i>et ux.</i>	Land at.....
7431	Mar. 27.	Charlotte Dunbrack.....	"
7432	" 18.	John A. McLean <i>et ux.</i>	"
7215	Feb. 6.	Alexander McDonald.....	Permission to close farm crossing.

SESSIONAL PAPER No. 20

and Canals from December 31, 1913 until March 31, 1914.

RAILWAY.

District	County.	Area.	Amount
			\$ cts.
Little River.....	Halifax, N.S.....	{ 2.09 } acres.....	98 55
Meaghers Grant.....	".....	{ 0.10 } ".....	175 00
".....	".....	1.93 ".....	102 00
East Lawrence.....	".....	6 ".....	200 00
Eastern Passage.....	".....	1.35 ".....	1 95
Little River.....	".....	0.39 ".....	200 60
East Lawrence.....	".....	3.26 ".....	100 00
Cole Harbour.....	".....	0.63 ".....	18 00
Elmsvale, Musquodoboit.....	".....	3.76 ".....	70 65
Upper Musquodoboit.....	".....	1.57 ".....	100 00
".....	".....	3.46 ".....	8 00
".....	".....	0.16 ".....	32 50
Centre ".....	".....	0.65 ".....	80 50
Middle ".....	".....	1.61 ".....	500 00
West Lawrencetown.....	".....	5.10 ".....	2 20
Upper Musquodoboit.....	".....	0.22 ".....	200 00
Eastern Passage.....	".....	1.36 ".....	390 00
Crawford's Falls.....	".....	1.45 ".....	25 00
Elmsvale.....	".....	2.39 ".....	1 00
Crawford's Falls.....	".....	1.28 acres.....	50 00
Cole Harbour.....	".....	11.59 ".....	350 00
East Lawrence.....	".....	0.76 ".....	76 00
Mulgrave.....	Guysborough, N.S.....		650 00
Cow Bay.....	Halifax, N.S.....	4.21 acres.....	25 26
Meaghers Grant.....	".....	2.46 ".....	49 20
".....	".....	3.89 ".....	77 80
Brierly Brook.....	Antigonish, N.S.....		Other crossing rights.

H. L. ALWARD,

General Solicitor.

5 GEORGE V., A. 1915

CANADIAN GOVERNMENT RAILWAYS.

STATEMENT of Claims settled by the Legal Claims Department during the period from January 1 to March 31, 1914.

File.	Claimant.	Address.	Amount.	Particulars of Claim.	Disposal.
			\$ cts.		\$ cts.
1-31	E. L. Dorton and Henry Deyoung.	Pomquet, N.S.	58 00	Fire damages to hay land and fences, May 1912	By payment of 10 00 to Dorton and 16 50 to Deyoung.
118	John Dolan	St. John, N.B.	560 00	Personal injuries and loss sustained in connection with accident at crossing in St. John, July 2, 1912.	By payment of 360 00 to Deyoung.
187	Omec Huot.	St. Nicholas, Que.	250 00	Fire damages to Woodland, Aug. 1911.	" 242 50
187	Benj. Olivier.	"	350 00	"	" 335 00
387	John D. Thompson.	Douglasfield, N.B.	20 00	Heifer killed on railway Oct. 12, 1912.	" 20 00
100	H. McC. Hart.	Windsor Junction, N.S.	1,786 32	Fire damages to stone crushing plant, April 27, 1913.	" 1,400 00
153	Wm. Langille.	Windsor John, N.S.	40 00	Fire damages to Woodland property, April 1913.	" 20 00
87	George Jolicoeur.	St. Henri Bridge.	3,340 00	Fire damages to property, April 1913.	" 2,025 00
87	Theophile Roberge.	"	1,500 00	"	" 825 00
87	H. C. Atkinson.	"	1,000 00	"	" 625 00
140	Joseph McMillan.	St. Peter's, P.E.I.	7 00	Lamb killed on railway, May 1913.	" 7 00
468	Edgar Holmes.	Truro, N.S.	400 00	Fire damages to barn and contents, June 29, 1913.	" 300 00
148	Joseph Delaney.	East River, N.S.	25 00	Fire damages to grass land, June 1913.	" 10 00
170	Peter Murphy.	Morrell, P.E.I.	200 00	Fire damages to woodland, June 1913.	" 125 00
168	Joseph Vezina.	Harlaka, Que.	60 00	Cow killed, June 4, 1913.	" 45 00
146	J. A. Reynolds.	Upper Stevieneke	12 00	Damage to wagon, July 1913.	" 12 00
155	Arsene Pelletier.	St. Arsene.	30 00	Heifer killed, July 1913.	" 30 00
284	Joseph Plourde.	St. Veneslas, Que.	12 00	Bull killed, July 1913.	" 12 00
217	Nap. Boissonault.	Laurier Village, Que.	75 00	Fire damages, Aug. 1913.	" 75 00
217	Jas. Cote.	"	150 00	Fire damages to woodland, Aug. 1913.	" 125 00
217	Phil. Cote.	"	25 00	"	" 24 00
409	J. L. Morton.	Cross Creek	8 00	Calf killed, Aug. 1913.	" 8 00
217	Alph. Paquette.	Laurier	115 00	Fire damages to woodland, Aug. 1913.	" 100 00
195	John Donald.	Upper Blackville, N.B.	25 00	Steer killed, Aug. 1913.	" 25 00
175	Joseph Labbe.	St. Charles, Que.	25 00	Damage to wagon, Aug. 16, 1913.	" 30 00
206	A. & R. Loggie.	Leggville, N.B.	255 34	Horse killed and damage to mill tramway, etc., Aug. 1913.	" 255 34
178	D. W. McDonald.	Lonsdowne, N.S.	3,143 00	Fire damages to property, Aug. 1913.	" 2,600 00
156	A. T. Avard.	Amherst, N.S.	450 00	Damages to automobile, Aug. 1913.	" 250 00
288	Irene Desmarais.	Stc. Rosalie, Que.	45 00	Fire damages, Aug. 7, 1913.	" 45 00
192	Timothee Gaudreau.	Stc. Flavie, Que.	200 00	Nare killed on railway, Aug. 1913.	" 200 00
145	J. D. M. Fraser.	Hopewell, N.S.	2,729 00	Fire damages to property, Sept. 22, 1913.	" 1,450 00
145	A. F. Grant.	"	2,995 00	"	" 1,400 00
145	Mrs. Enon McDonald.	"	1,960 00	"	" 900 00
145	Independent Order of Foresters (per H. D. McLeod.)	"	1,550 00	"	" 900 00

SESSIONAL PAPER No. 20

145	Mrs. James McPherson	"	672 00	"	350 00
538	Nicholas Bertain	St. Peter's River, N.B.	190 00	Colt killed, Sept. 1913.	165 00
297	Wm. Heatherly	No. Welfshire, P.E.I.	32 00	Sheep killed, Sept. 1913.	32 00
228	Zulah J. Morrell	St. John, N.B.	25 00	Wearing apparel " "	19 00
228	Edith B. Staples	Marysville, N.B.	16 25	"	11 00
332	Emile Gagnon	Kempt, Que.	24 00	Sheep killed Oct. 1913.	22 00
434	John Harrington	Conway, P.E.I.	4 00	Lamb killed, Oct. 1913.	4 00
300	S. L. T. Harrison	Moncton, N.B.	50 00	Cow killed on railway near Salisbury, N.B., Oct. 8, 1913.	40 00
427	Joseph Langlois, jr.	St. Annelet, Que.	15 00	"	15 00
294	Telesphore Morris	St. Fabien, Que.	45 00	Bull killed on railway, Oct. 1913.	30 00
407	Geo. E. Full	Charlottetown, P.E.I.	46 30	Damages to factory through shunting of train.	46 30
279	Ernest Levesque	Beaurivage, Que.	98 00	Personal injuries and damages to sled, Nov. 1912.	25 00
57	John Andrews	North Sydney, N.S.	200 00	Personal injuries received at North Sydney, N.S., May 10, 1912.	100 00
453	M. Buchanan	Fredericton, P.E.I.	20 00	Heifer killed, Nov. 1913.	20 00
451	John H. Bertain	Nigadoo, N.B.	15 00	Cattle killed, Nov. 1913.	15 00
377	Ed. Baxter	Marshy Hope, N.S.	6 00	Sheep killed, Nov. 1913.	6 00
545	Joseph McKenna	Tracadie, P.E.I.	6 00	"	6 00
299	C. H. McIntyre	McIntyre's Lake, C.B.	40 00	Ox killed, Nov. 1913.	20 00
532	Mrs. R. E. McLellan	Hallfax, N.S.	5 00	Damage to roof by blast, Dec. 1913.	5 00
425	Arsene Theriault	Kempt, Que.	40 00	Damage to sleigh on railway, Dec. 1913.	35 00
424	Alexis Chabot	St. Charles, Que.	3 00	Damage to harness, Jan. 1914.	3 00
450	Angus McDonald	West River, N.S.	10 00	Bobsled damaged, Jan. 1914.	10 00
			24,963 21		
					15,775 64

H. F. ALWARD,

General Claims Agent.

5 GEORGE V., A. 1915

INTERCOLONIAL

STATEMENT of Casualties for the

Date.	Time of Day.	No. of Train	Description of train.	Name of conductor.	Name of driver.	No. of Engine	Place of Accident.
1913.							
April 5	.....	Special.....	Freight.....	Hains and McDougall.	Wood.....	.....	Bathurst.....
" 9	15.00	Special.....	Freight.....	R. Doyle.....	R. Simpson.....	148	Nappan.....
" 9	15.30	175	Freight.....	W. A. Munn.....	E. Satchel.....	70	Sydney.....
" 18	12.30	Special.....	Freight.....	J. Baxter.....	A. Urquhart.....	113	Gordon's Summit Siding.
" 19	5.30	.....	Shunter.....	R. Rutland.....	P. McInnis.....	819	Halifax.....
" 24	8.20	Special.....	Passenger.....	L. Bannerman.....	D. Wood.....	636	Between Bartibogue and Red Pine.
" 26	.....	35	Passenger.....	J. Swetnam.....	R. Bulmer.....	636	Harcourt.....
" 27	5.30	.....	.....	.....	.....	.....	1 mile east of Moncton.
May 5	13.35	Special.....	Freight.....	J. Russell.....	G. Wortman.....	49	Newcastle.....
" 7	12.45	Special.....	Freight.....	R. Henry.....	J. Cameron.....	1103	Millerton.....
" 1	20.00	.....	Shunter.....	M. Wrynn.....	R. Jefferson.....	73	Springhill.....
" 7	6.10	17	Passenger.....	J. McLellan.....	C. Wilson.....	646	Sydney.....
" 17	23.15	134	Passenger.....	C. B. Clarke.....	W. J. Coffey.....	634	½ mile east Shediac.
" 21	24.40	Special.....	Freight.....	T. G. Stratton.....	H. Somers.....	42	Newcastle.....
" 22	20.35	99	Freight.....	N. Levesque.....	E. Henderson.....	123	Moffatts Bridge.....
" 24	2.30	40	Freight.....	W. F. Fergusson.....	O. Gilker.....	27	Red Pine.
" 26	6.00	Special.....	Freight.....	J. McDougall.....	Meech.....	.....	No. Sydney Junction.
" 28	2.00	Special.....	Freight.....	W. McGillivray.....	M. Smith.....	66	Pt. Tupper.....
" 30	14.30	Special.....	Ballast.....	A. B. Gotro.....	D. Wood.....	73	Jacquet River.....
June 2	2.30	.....	Light engine	J. Matheson.....	H. R. Fillmore.....	1089	¼ mile east Westville
" 6	20.30	55	Freight.....	J. E. Fleming.....	J. B. Champion.....	77	Har. au Bouche.....
" 9	7.00	.....	Engine.....	.....	.....	1073	Stellarton.....
" 11	16.20	Special.....	Freight.....	C. E. Morton.....	G. Wilson.....	208	Bathurst.....
" 11	18.30	.....	.....	.....	.....	.....	Harcourt.....
" 11	8.45	Special.....	Ballast.....	A. Lemieux.....	W. Mountain.....	89	Chaud. Jct.....
" 14	13.23	.....	Shunter.....	C. D. McDonald.....	H. Thompson.....	803	Stellarton.....
" 16	11.45	.....	Way Fgt.....	D. Sweney.....	Frank Gibson.....	154	Newcastle.....
" 16	5.00	.....	Light engine	J. Sutherland.....	J. Cameron.....	101	2 River Denys.....
" 18	8.55	145	Passenger.....	M. Varville.....	J. Houston.....	616	St. Hyacinthe.....
" 18	17.30	.....	.....	.....	.....	.....	Stellarton.....
" 21	11.50	104	Freight.....	G. H. Pushie.....	A. McLean.....	70	Beaver Cove.....

SESSIONAL PAPER No. 20

RAILWAY.

Fiscal Year ended March 31, 1914.

Name of Person injured.	Whether passenger or employee.	Particulars of Accident.	Extent of injury.	Verdict.
E. Bateman.....	Passenger.....	McDougall's special ran into	Fatal.....	Negligence of train
J. E. Hachey.....	".....	Hain's special.....	".....	
R. Chamberlain.....	".....	".....	Ribs broken.	No inquest.
Robert Medonald.....	Neither.....	Attempted to cross track, struck by train.	Fatal.....	
Robert Lund.....	Brakeman.....	Hand caught while coupling cars.	Two fingers smashed.	Ry. exonerated from blame.
Jos. Baxter.....	Conductor.....	Knocked from van to rail by slack of train.	Ribs and shoulder injured.	
R. L. Sims.....	Yardman.....	Fell from car.....	Arm badly sprained.	Ry. exonerated from blame.
Miss Ada Moore.....	Passenger.....	Oil stove exploded.....	Face badly burned.	
Fred Beers.....	Brakeman.....	Caught hand in baggage car door.	Finger injured.	Ry. exonerated from blame.
Philip Gagne.....	Tankman.....	Supposed to have been struck by train.	Fatal.....	
J. M. LeBlanc.....	Brakeman.....	Dumped through hopper.....	Badly bruised.	Ry. exonerated from blame.
Clarence Smith.....	Brakeman.....	Stepped in hole containing hot water from exhaust pipe.	Right leg badly scalded.	
C. E. Gourley.....	Brakeman.....	Hand caught while coupling cars.	Two fingers smashed.	Ry. exonerated from blame.
Frank McDonald.....	Passenger.....	Jumped from train while in motion.	Collar bone fractured.	
Joseph Petitpas.....	Neither.....	Lying on track struck by train.	Fatal.....	Ry. exonerated from blame.
John McCabe.....	Brakeman.....	Heel caught under wheel.....	Slightly injured.	
J. N. Dastous.....	Brakeman.....	Stepped from engine, fell over bridge.	Seriously bruised.	Ry. exonerated from blame.
M. Gogan.....	Brakeman.....	Fell from tender of engine.....	Right side injured.	
B. Almon.....	Brakeman.....	Foot slipped between knuckles pushing draw bar over.	Heel badly injured.	Ry. exonerated from blame.
Wm. Smith.....	Driver.....	Caught between pump and engine.	Arm injured.	
J. A. Magee.....	Brakeman.....	Ankle caught by flanger.....	Slightly injured.	Death from unknown causes.
G. Graham.....	Neither.....	Sitting on track struck by train.	Fatal.....	
J. Fleming.....	Conductor.....	Fell while helping to lift frog.	Ankle dislocated.	Ry. exonerated from blame.
Paul Good.....	Brakeman.....	Fell off engine.....	Slightly injured.	
Jos. Talbot.....	Brakeman.....	Knocked off car while taking water.	Hip slightly hurt.	Ry. exonerated from blame.
John W. Morton.....	Lighter.....	Semaphore fell while lighting lamp.	Fatal.....	
M. Morneau.....	Section foreman.....	Stepping clear ballast train struck by shunting engine.	Fatal.....	Accidental death, Ry. exonerated.
C. D. McDonald.....	Yard foreman.....	Hand caught coupling cars.	Slightly injured.	
C. Scurr.....	Brakeman.....	Fell off box car.....	Seriously injured.	Accidental death, Ry. exonerated.
J. McEachern.....	Foreman.....	Fell from engine tender.....	Hip injured.	
P. Deschene.....	Neither.....	Walking track struck by train.	Fatal.....	Accidental death, Ry. exonerated.
G. A. McLeod.....	Switchman.....	Fell off ladder of semaphore.	Leg and arm injured.	
John Ryan.....	Brakeman.....	Slipped and fell.....	Shoulder and hip injured.	

5 GEORGE V., A. 1915

INTERCOLONIAL

STATEMENT of Casualties for the Fiscal

Date.	Time of Day.	No. of Train	Description of train.	Name of conductor.	Name of driver.	No. of Engine	Place of Accident.
1913.							
June 23	14.38	Special.....	Freight.....	J. V. McDonald...	R. Hamilton.....	204	Wentworth.....
" 22	14.00	41	Freight.....	J. Beaulieu.....	J. Smith.....	72	McGregor's Siding..
" 25	12.30	Special.....	Freight.....	E. J. McDonald...	Gunning.....	622	Pugwash.....
" 26	10.30		Shunter.....		Smallwood.....	806	Moncton.....
" 27	14.30		Shunter.....	A. Cameron.....	C. Keith.....	1009	No. Sydney.....
" 27	17.30	Special.....	Freight.....	T. Stratton.....	T. Eagles.....	217	Jacquet River.....
" 28	10.15		Work train..	Wm. Hinch.....	J. Hessian.....	54	Richmond.....
" 28	3.55	Special.....	Freight.....	J. A. Beaulieu...	F. Beaulieu.....	422	St. Simon.....
July 2	17.00	74		C. Fournier.....	R. McKenzie.....	23	Little Metis.....
" 2	19.10	Special.....	Freight.....	C. E. Morton.....	Geo. Wilson.....	209	Charlo.....
" 4	24.45	Special and	74	A. Lemieux.....	G. Cote.....	49	L'Islet.....
" 10	8.15	14		J. Buchanan.....	Geo. Feetham...	97	
" 12	24.00	Special.....	Passenger...	G. W. Ross.....	W. Sproul.....	603	P. Lodge.....
" 15	16.00			J. Rioux.....	F. Cloutier.....	44	Tatamagouche.....
" 16	9.30			A. Potvin.....			Levis.....
" 17	12.30		Shunter.....	J. St. Pierre.....	A. McKenzie.....	131	Princess Pier.....
" 20							Val Brillant.....
" 20							Campbellton.....
" 21	7.30						Newcastle.....
" 22	17.58	46		A. Therriault.....	E. Ouellet.....	410	LaDurantaye.....
" 23			Freight.....	Morton.....			Newcastle.....
" 29	14.00	Special.....	Freight.....	A. Philips.....	R. Kennedy.....	35	Amherst.....
" 30	22.00		Freight.....	J. F. Doyle.....	W. Gunning.....	13	Bathurst.....
Aug. 2	20.00	17		B. G. Wood.....	Youlds.....		Truro.....
" 4	8.15	33	Passenger...	A. Begin.....	W. Rioux.....	430	St. Eloi.....
" 8	17.20	Special.....	Ballast.....	B. Ripley.....	J. McLean.....	78	Elmsdale.....
" 10	8.30		Shunter.....	W. Smith.....	W. Savidant.....	824	Campbellton.....
" 11							Bathurst.....
" 14	10.45	Special.....	Freight.....	D. O. McDonald..	Peoples.....	103	Pugwash Jct.....
" 18	19.00	Special.....	Freight.....	J. Baxter.....	A. Urquhart.....	146	Truro.....
" 19		200	Passenger...				Bathurst.....
" 21	7.40	24	Freight.....	M. C. Daley.....	A. Cook.....	17	Greenville.....
" 22	14.45	Special.....	Freight.....	P. Bannerman.....	J. E. Travis.....	1122	Chatham.....
" 25	8.30		Shunter.....	B. Dickie.....	J. Phinney.....	823	Truro.....
" 27	14.14	Special.....	Freight.....	E. A. Smith.....	W. McGarity.....	17	Penobsquis.....
" 27	11.30	Special.....	Freight.....	W. J. Ellis.....	L. Starritt.....	149	Windsor Jet.....
Sept. 2	17.42	34	Passenger...	Bouthillette.....	Geo. Findlay.....	413	St. Hilaire.....
" 4		303	Regular.....	W. Long.....			Fredericton.....
" 5		19					Truro.....
" 6	4.45	Special.....	Excursion...	Brownrigg.....	H. Thompson.....	26	Rogers Siding.....
" 6							Petit Rocher.....
" 6	15.10		Shunter.....	R. H. Wilkins.....	W. Atkinson.....	1009	No. Sydney.....
" 6		33	Passenger...	H. Barreau.....			Newcastle.....

SESSIONAL PAPER No. 20

RAILWAY.

Year ended March 31, 1914—*Continued.*

Name of Person injured.	Whether passenger or employee.	Particulars of Accident.	Extent of injury.	Verdict.
H. Carson.....	Electrician.....	Gasoline car struck by train.	Both slightly injured.	Accidental death struck by unknown train.
H. G. Rolfe.....	"			
E. Banville.....	Brakeman.....	Fell off ladder of box car.	Elbow dislocated.	
A. A. McLellan.....	Brakeman.....	Hand caught in coupler.	Finger smashed.	
F. F. Nickerson.....	Brakeman.....	Foot caught in foot board.	Badly sprained.	
A. D. Holmes.....	Brakeman.....	Finger caught coupling cars.	Finger crushed.	
L. Hachey.....	Brakeman.....	Hand caught in car door.	Finger jammed.	
Roy Cochrane.....	Labourer.....	Jammed between cars.	Slightly injured.	
Claude Caron.....	Neither.....	Struck by train at crossing.	Head badly cut.	
Arthur Dube.....	Brakeman.....	Struck by tank pipe.	Head badly bruised and ankle sprained.	
John Comeau.....	Brakeman.....	Hand caught uncoupling car.	Finger jammed.	Accidental death struck by unknown train.
J. A. Morin.....	Fireman.....	Jumped from train.	Shoulder bruised.	
Geo. Cook.....	Passenger.....	Fell trying to get on train while in motion.	Neck cut and knee injured.	
L. Langille.....	Passenger.....	Jumped off train.	Ankle sprained.	Accidental death struck by unknown train.
T. Beaulieu.....	Neither.....	Supposed to have been struck by train.	Fatal.	
A. Potvin.....	Employee.....	Testing steam crane.	Hand broken.	
E. Dube.....	Brakeman.....	Back injured while shunting.	Slightly.	Accidental death struck by unknown train.
Wm. Allen.....	Neither.....	Struck by train.	Fatal.	
A. Bourdeau.....	Trackman.....	Struck by rail.	Ankle badly bruised.	
George Brochu.....		Walking on track.	Slightly injured.	No inquest.
M. Richard.....	Brakeman.....	Closing car door.	Thumb injured.	
Dan. Hanley.....	Neither.....	Foot caught in draw bars.	Foot broken.	
W. Gunning.....	Driver.....	Hand caught under falling coal.	Slightly injured.	
T. T. Robinson.....	Passenger.....	Fell off cars steps.	Slightly injured.	
Unknown.....	Neither.....	Walking or lying on track.	Fatal.	
T. Chambers.....	Foreman.....	Foot caught under wheels.	Badly crushed.	
U. Germain.....	Yardman.....	Hand jammed.	Slightly injured.	
C. Thompson.....	Passenger.....	Fell from track to road.	Slightly injured.	
Mrs. Gamble and child	Passengers.....	Collision between two specials.	Slightly injured.	
A. D. McInnis.....	Brakeman.....	Uncoupling cars.	Wrist injured.	Accidental death.
Sydney Gunn.....	Passenger.....	Finger pinched while on buffer.	Slightly injured.	
J. R. Carney.....	Brakeman.....	Fell off steps of van.	Knee injured.	
John Davidson.....	Labourer.....	Struck with angle bar.	Slightly injured.	
F. Bailey.....	Brakeman.....	Foot caught in draw bar.	Foot crushed.	
W. A. Steeves.....	Brakeman.....	Leg cut while working.	Slightly injured.	
R. B. Johnson.....	Brakeman.....	Pushing draw bar into position.	Arm badly jammed.	
John McRae.....	Neither.....	Driving over crossing struck by train.	Fatal.	
A. Anclair.....			Badly injured.	
W. Long.....	Conductor.....	Thrown against chair in van by slack of train.	Slightly injured.	
Robt. Bartlett.....	Neither.....	Struck by train walking track.	Both legs crushed one broken.	No inquest.
John Fraser.....	Passenger.....	Jumped from window.	Three scalp wounds, not serious.	
J. Devereaux.....	Neither.....	Fell over bridge.	Fatal.	
W. H. Bedford.....	Brakeman.....	Foot caught on buffer.	Slightly injured.	No inquest.
Geo. Helleur.....	Passenger.....	Fell from train.	Back bruised, head cut.	

5 GEORGE V., A. 1915

INTERCOLONIAL

STATEMENT of Casualties for the Fiscal

Date.	Time of Day.	No. of Train	Description of train.	Name of conductor.	Name of driver.	No. of Engine	Place of Accident.
1913.							
Sept. 6	14.05	19	Passenger.....				South River.....
" 8	19.45	238	Freight.....	D. Sullivan.....	R. Jefferson.....	11	Springhill Jet.....
" 10	18.50	169	Freight.....	W. A. Warman.....	J. Oakleaf.....	1029	Dalhousie.....
" 11	10.00	45	Passenger.....	B. Walker.....			St. Chas. Jet.....
" 13	14.40	199	Passenger.....	J. Berry.....	W. Gross.....	438	Moncton.....
" 16	16.10		Shunter.....	E. S. Vye.....	W. Atkinson.....	1044	Newcastle.....
" 20	20.20		Special.....	R. H. Wilkins.....	W. Atkinson.....	1009	No. Sydney.....
" 23	16.00	231	Freight.....	G. Armstrong.....	E. Rushton.....	24	Siddalls Cut.....
		234	Freight.....	J. McDonald.....	F. Lynds.....	203	
" 25	23.20	316		A. A. Ayer.....	H. Cameron.....	1045	Chatham.....
" 30	23.50	Special.	Excursion.....	G. Crawford.....	J. Gunning.....	602	River John.....
Oct. 1	5.00	22	Passenger.....				Mulgrave.....
" 2		34	Passenger.....				St. Alexandre.....
" 3	8.43	14		J. Buchanan.....	G. Feetham.....	603	Halifax.....
" 4	19.15		Shunter.....	F. McDonald.....	E. C. Moxon.....	82	Halifax.....
" 5	5.35	Special.....		Bruce.....	Henderson.....	46	Riversdale.....
" 8	1.00	Special.....		G. MacKay.....	T. O. Grant.....	103	James River.....
" 8							Gloucester Jet.....
" 10	1.30	Special.....		John Howatt.....		23	McNeil's Stn.....
" 11	10.00						Charlottetown.....
" 13	8.00		Shunter.....	Dickie.....	J. Kelly.....	148	Truro.....
" 15	10.05	34	Passenger.....	J. Chisholm.....	R. Lightbody.....	414	Springhill Jet.....
" 15	15.00		Shunter.....			70	No. Sydney.....
" 20	7.34	200	Passenger.....	H. Aubin.....	H. Michaud.....	433	Amqui.....
" 22	18.20	3	Passenger.....	M. Wilson.....	J. Stackford.....	624	Quispamsis.....
" 24	12.34	33	Passenger.....	H. Begin.....	Jas. Millar.....	431	St. Joseph, Que.....
" 25	23.00		Shunter.....	McDonald.....	H. Seothorn.....	805	Sydney.....
" 29	5.55	14	Passenger.....	J. Buchanan.....	G. Feetham.....		Truro.....
" 29		36	Passenger.....	M. Cummings.....	D. Pinco.....		Barnaby River.....
" 30	12.00		Special.....	D. McDonald.....	H. Fillmore.....	103	Pugwash.....
Nov. 1	1.25	Way.....	Freight.....	J. Doyle.....		73	Campbellton.....
" 4	20.45		Mixed.....	Warman.....	Oakleaf.....		Dalhousie.....
" 7	15.00	13		J. Buchanan.....	G. Feetham.....	603	Shubenacadie.....
" 8	15.40	74		V. Gendron.....	J. Deon.....	135	St. Rosalie.....
" 8	18.40	8	Passenger.....	J. McManus.....	Jas. Moody.....	642	Norton.....
" 19	10.00		Shunter.....	J. P. McKay.....			Stellarton.....
" 23	1.15				Emile Roy.....	10	Ste. Rosalie.....
" 26	12.00	Special.....	Freight.....	D. Sweeney.....	D. McQuarrie.....	73	Bathurst.....
" 25	14.10	Special.....		D. J. Druhan.....	I. Stockall.....	407	Bedford.....

SESSIONAL PAPER No. 20

RAILWAY.

Year ended March 31, 1914—*Continued.*

Name of Person injured.	Whether passenger or employee.	Particulars of Accident.	Extent of injury.	Verdict.
A. M. Chisholm.....	Passenger.....	Foot caught while getting off train.	Foot crushed.	Accidental death, Ry. exonerated.
P. M. LeBlanc.....	Brakeman.....	Caught while uncoupling cars	Fatal.....	
A. Callahan.....	Brakeman.....	Struck by overhanging roof.	Bad shaking up.	
A. Potvin.....	Passenger.....	Fell off train.....	Slightly injured.	Responsibility placed on one of train crews.
Mrs. G. Cochrane.....	Neither.....	Struck by train while walking on track.	Shoulder blades and ribs broken.	
H. Underhill.....	Brakeman.....	Stepped on broken bottle...	Foot badly cut.	
Michael Lee.....	Neither.....	Struck by train while lying on track.	Cut about the head.	
E. Rushton.....	Driver.....	Head on collision.....	Fatal.....	
B. Colpitts.....	Fireman.....	.....	"
Frank Lynds.....	Driver.....	.....	"
O. Hingley.....	Fireman.....	.....	"
W. Banks.....	Brakeman.....	.....	"
H. Underhill.....	Brakeman.....	Jammed between cars.....	Slightly injured.	
A. Cunningham.....	Passenger.....	Fell from platform under train.	Arm crushed had to be amputated.	Accidental death, cause unknown.
J. Isksen.....	Employee.....	Fell under car.....	Leg badly crushed.	
E. Broupre.....	Brakeman.....	Trunk fell on foot.....	Toe disjoined.	
Chas. Hayward.....	Passenger.....	Fell off train.....	Slightly injured.	
T. McDonald.....	Foreman.....	Ankle sprained.....	Slightly injured.	
H. McIsaac.....	Brakeman.....	Struck by train.....	Face cut and arm bruised.	
Wm. McLeod.....	Fireman.....	Head out cab window struck by car.	Head badly cut.	
Wm. McCallum.....	Neither.....	Supposed to have been struck by train.	Fatal.....	
Robt. Farrell.....	Lineman.....	Struck while unloading poles	Slightly injured.	
Edgar Walker.....	Carpenter.....	Fell into vat of potash.....	Feet and legs badly scalded.	
Henry Irving.....	Brakeman.....	Foot caught between cars...	Slightly injured.	Accidental death.
M. Brayley.....	Neither.....	Jumped from train.....	Slightly injured.	
Jas. Smith.....	Labourer.....	Thrown from car of lumber.	Shoulder badly injured.	
J. Simoneau.....	Neither.....	Supposed to have been struck by train.	Fatal.....	
J. Bradley.....	Neither.....	Struck by train while walking on track.	Fatal.....	
E. Gagnon.....	Neither.....	Found on track struck by train.	Fatal.....	
E. Foster.....	Neither.....	Attempted to cross track...	Knee cut.	
E. Nelson.....	Lamp lighter.....	Fell under train.....	Leg crushed (amputated).	
Mary Boyle.....	Passenger.....	Fell off car steps.....	Knee injured.	
Chesley Betts.....	Foreman.....	Struck in face by sod from train.	Shoulder dislocated.	
J. T. Doyle.....	Conductor.....	Stepped in hole in yard.....	Leg injured.	Accidental death.
S. Poirier.....	Neither.....	Fell over bags of potatoes.	Ankle broken.	
John Blake.....	Neither.....	Struck with milk can.....	Slightly cut.	
H. Laliberte.....	Car inspector.....	Hand caught in draw bars...	Badly crushed.	
Stephen Peters.....	Passenger.....	Fell from train.....	Slightly injured.	
J. A. McDonald.....	Shunter.....	Load of coal fell from coal chute.	Cut on head, ankle and shoulder bruised.	
Emile Roy.....	Driver.....	Fell off engine.....	Leg broken.	
D. McQuarrie.....	Driver.....	Pulling down semaphore slipped and fell.	Ankle sprained.	
V. Lively.....	Neither.....	Struck by train while walking on track.	Left arm broken.	

5 GEORGE V., A. 1915

INTERCOLONIAL

STATEMENT of Casualties for the Fiscal

Date.	Time of Day.	No. of Train	Description of train.	Name of conductor.	Name of driver.	No. of Engine	Place of Accident.
1913.							
Nov. 27	11.10	35	Passenger.	J. McGinn.	A. Donald.	404	Berry's Mills.
" 27	12.10	15	Passenger.	J. Daley.	A. Fryers.	416	Little Forks.
" 27	3.00		Shunter.		J. Kennedy.	807	Truro.
" 27	8.50	Special.		E. Crowe.	E. McKenzie.	209	Onslow.
" 29							Fort Lawrence.
Dec. 1	17.45	Special.		M. McGillivray.	H. Cutler.	146	Trenton.
" 1	19.40	154	Passenger.	V. Roy.	G. Begin.	409	St. Bruno.
" 5	9.30	Special.	Freight.	E. A. Smith.	J. Burns.	25	Hampton.
" 6	10.50		Shunter.	R. Redmond.	J. Hessian.	827	Richmond.
" 6		Special.		Pilon.	Marceaux.		St. Hilaire.
" 7		Pilot.		O. Guay.	S. Edwards.	94	Ste. Rosalie.
" 9		Special.	Freight.	D. Sweeney.	D. McQuarrie.	73	Bathurst.
" 19		Special.		M. McGillivray.	H. S. Cutten.	103	Trenton.
" 20	22.30	75	Freight.	C. McDougall.	R. C. Colpitts.	267	Bathurst.
" 24	9.10	59	Mixed.	E. S. Vye.	D. J. Wood.	1043	Quarryville.
" 24	7.45	Special.	Freight.	N. Sirois.	E. Cote.	137	St. Simon.
" 24	15.39			C. Youlds.	L. Kennedy.		Richmond.
" 25	9.40	29	Passenger.	A. J. Welling.	F. Welling.	1095	Between Painsec and Moncton.
" 26	12.50		Shunter.	G. Kelly.	C. Barnaby.	26	Truro.
" 26	9.45		Special.	W. Grantmyre.	H. Seothorn.	65	Sydney.
" 26	10.10		Pilot.	W. Tees.	S. Edwards.	94	Ste. Rosalie.
" 27	14.35	20	Passenger.	G. C. Keays.	L. W. King.	421	Piedmont.
" 28	8.00		Special.	W. H. Wilbur.	J. C. Mahoney.	206	Amherst.
" 29	10.30						No. Sydney.
" 30	19.00	Work.	Train.	W. Whalen.	W. S. Matthews.	1044	Coughlins.
" 31	8.00						Truro.
" 31	14.20		Shunter.	J. Savard.	C. Mercier.	12	Riv. du Loup.
1914.							
Jan. 2	8.20	231	Freight.	A. Philips.	R. Kennedy.	54	Folleigh.
" 7	13.45		Shunter.	H. Upham.	C. Coleman.	827	Halifax.
" 7	7.10		Shunter.		G. McCray.	814	Moncton.
" 8	6.00		Shunter.	C. Garland.	J. Spear.	815	Moncton.
" 8	9.30		Shunter.	W. Herrington.		8	St. John.
" 13	11.00			C. Cavenagh.	H. Bulmer.	74	Truro.
" 13	15.30	18	Passenger.				New Glasgow.

SESSIONAL PAPER No. 20

RAILWAY.

Year ended March 31, 1914—*Continued.*

Name of Person injured.	Whether passenger or employee.	Particulars of Accident.	Extent of injury.	Verdict.
John McGinn.....	Conductor.....	Gas lamp exploded.....	Burned about face and neck.	Accidental death.
R. Noyes.....	Employees.....	While running hand car struck by train.	Fatal.....	
W. R. Cray.....	Shunter.....	Hand caught between chock and wheel.	Finger crushed.	
J. Kennedy.....	Shunter.....	Hand caught between chock and wheel.	Finger crushed.	
Chas. Porter.....	Employee.....	Fell while getting off train.	Hip injured.	No inquest.
R. Mitchell.....	Neither.....	Supposed to have been run over by train.	Fatal.....	
S. Bodnar.....	Neither.....	Crossing between cars.	Foot injured.	
Nap. Mongeon.....	Passenger.....	Jumped from train while in motion.	Face slightly injured.	
B. J. White.....	Brakeman.....	Unloading freight.....	Big toe broken.	Accidental death, Ry. exonerated from blame
E. Kennington.....	Trackman.....	Car derailed.....	Slightly jammed about hips.	
Unknown.....	Neither.....	Struck by unknown train.	Fatal.....	
M. Paradis.....	Brakeman.....	Pulling pin on van.....	Wrist hurt.	
Mrs. M. Pelletier.....	Passenger.....	Knocked down while standing at car door.	Arm broken and hip injured.	No inquest.
John Stewart.....	Neither.....	Crossing over train between cars.	Shoulder injured.	
C. McDougall.....	Conductor.....	Coupling cars.	Hand crushed.	
D. McDonald.....	Neither.....	Caught on bridge by train and fell off.	Fatal.....	
F. Lemarre.....	Neither.....	While walking on track struck by train.	Fatal.....	No inquest.
Chas. Hughes.....	Neither.....	While walking on track struck by train.	Fatal.....	No inquest.
J. A. Casey.....	Trackman.....	Running flanger; hit by lever	Jaw broken and head cut.	No inquest.
Fred Layton.....	Brakeman.....	Coupling cars.....	Two ribs broken and right lung punctured.	
R. Wellwood.....	Foreman.....	Running into shunting engine	Cut about face....	
L. Tanguay.....	Snow shoveller.....	Run over by engine; leg cut off.	Died next day....	
C. J. McKinnon.....	Brakeman.....	Jumped off train.....	Head badly cut.	No inquest.
W. H. Wilbur.....	Conductor.....	Caught between train and freight shed platform.	Slightly jammed.	
D. McDonald.....	Checker.....	Cleaning stove with benzine mixture.	Burned about limbs.	
D. Mountain.....	Brakeman.....	Uncoupling air hose on van.	Head and ears cut slightly.	
R. McGregor.....	Lamplighter.....	Connecting gas hose on car gas exploded.	Burned about limbs.	No inquest.
W. Fortin.....	Fireman.....	Fell off engine, hit by tender box.	Head slightly injured.	
John Fulton.....	Fireman.....	Fell from top of tender to cab.	Knee cap injured.	
R. M. Pineo.....	Yardman.....	Fell while getting on car....	Slightly injured.	
Wm. Hoey.....	Fireman.....	Shunter ran into passenger engine.	Leg badly crushed amputated.	No inquest.
F. McManus.....	Brakeman.....	Knocked off car by switch stand, fell under train.	Fatal.....	
G. Osborne.....	Neither.....	Supposed to have been sitting under cars.	Left leg run over.	
H. Bulmer.....	Driver.....	Caught between draw bars.	Hips injured.	
H. Oliver.....	Car oiler.....	Struck by brake lever.....	Head slightly injured.	

SESSIONAL PAPER No. 20

RAILWAY.

Year ended March 31, 1914—*Concluded.*

Name of Person injured.	Whether passenger or employee.	Particulars of Accident.	Extent of injury.	Verdict.
J. Hurley.....	Neither.....	While walking on track struck by train.	Fatal.....	Accidental death, Ry. exonerated.
F. Wilson.....	Neither.....	While walking on track struck by train.	Fatal.....	Accidental death Ry. exonerated.
Chas. Diggs.....	Neither.....	Knocked off cars, struck by train.	Head slightly injured.	
A. Lepage.....	Brakeman.....	Fell off car.....	Knee slightly injured.	
G. Patterson.....	Brakeman.....	Hand caught while coupling cars.	Fingers smashed.	
Ida McKenzie.....	Neither.....	Struck by train while attempting to cross track.	One arm and part of other hand cut off.	
Thos. McKenzie.....	"		Slightly injured.	
J. Craigie.....	Conductor.....	Slipped and fell.....	Shoulder disloc'd.	
E. Ashford.....	Fireman.....	Tubes in engine burst.....	Slightly scalded.	
H. McIsaac.....	Brakeman.....	Struck by coal falling from tender.	Head badly cut.	
R. Waddell.....	Neither.....	Struck by engine on crossing.	Slightly injured.	
P. Lutes.....	Fireman.....	Struck by engine.....	Leg and side injured.	
W. E. Byers.....	Baggagemaster.....	Trunk fell on back.....	Back badly injured.	
J. Gilchrist.....	Passenger.....	Attempted to board train foot caught dragged $\frac{1}{4}$ of mile.	Fatal.....	No inquest.
J. T. N. Dionne.....	Machinist.....	Struck on head by piece of flying iron.	Head badly cut and bruised.	
Nap. Cormier.....	Fireman.....	Fell off engine tender.....	Hip slightly injured.	
J. B. Nelson.....	Neither.....	Attempted to board moving train.	Slightly injured.	
H. Fraser.....	Labourer.....	Fell from staging.....	Leg broken.	
C. Atkinson.....	Passenger.....	Jumped from moving train.	Slightly injured.	
C. Allain.....	Neither.....	Driving on track, struck by train.	Fatal.....	No inquest.
Wm. Payne.....	Brakeman.....	Jumped from train.....	Ankle sprained.	
A. Downie.....	Neither.....	Jumped from train struck switch engine.	Head injured.	
A. Gallant.....	Brakeman.....	Struck by semaphore arm.....	Slightly injured.	
Unknown.....	Neither.....	Supposed to have been struck by train.	Fatal.....	Accidental death, Ry. exonerated.
Geo. Dick.....	Fireman.....	Fell from engine tender.....	Head and back injured.	
N. LeClerc.....	Neither.....	Thrown from team on track, struck by train.	Fatal.....	Accidental death, Ry. exonerated.
Miss B. Goulet.....	Neither.....	While walking on track, struck by train.	Slightly injured.	
G. Tracy.....	Neither.....	Struck by train.....	Fatal.	
Jas. Wiles.....	Driver.....	Collision.....	Slightly injured.	
D. J. McDonald.....	Porter.....	Unloading freight in car.....	Forehead cut and nose bruised.	

H. F. ALWARD,
General Solicitor.

PRINCE EDWARD ISLAND RAILWAY.

DETAILS of Accidents for the period ending March 31, 1914.

Date.	Name, Address and Occupation of Persons.	Place of accident.	Cause.	Nature and extent of injury.
1913.				
April 5	Joseph O'Reilly, baggageman, Charlottetown.	On line of railway.	Closed car door on thumb.	Injured thumb.
May 5	Frank H. Hale, machinist, Charlottetown.	Charlottetown.	While working at engine a heavy beam struck him on head.	Head injured.
May 7	Albert E. Newsome, machinist, Charlottetown.	Charlottetown.	While working at wheel-press a block of wood struck him on chin.	Chin badly cut.
June 2	A. J. McDonald, baggagemaster, Georgetown.	Cardigan.	While unloading freight cut hand.	Hand cut badly.
June 4	Fred Craswell, section man, Cardigan.	Perth ballast pit.	While putting in frog, slipped and fell on rail.	Leg injured.
Aug. 11	Martin Walsh, carpenter, Charlottetown.	Charlottetown.	While stepping across pit fell and broke bone in ankle.	Broken bone in ankle.
Aug. 18	Hugh McKinnon, section man, Bradallbane.	Bradallbane.	Injured his shoulder handling ties.	Shoulder injured.
Sept. 3	Fred Caswell, section man, Cardigan.	Perth.	Broke one of his fingers unloading ties.	Broken finger.
Sept. 5	Joseph T. Hardy, section man, Elmsdale.	Elmsdale.	While handling old ties, fell and struck against end of them.	Breast injured.
Sept. 12	E. J. Harper, section man, Tignish.	Tignish.	While loading concrete pipe some pipe fell on foot.	Foot bruised.
Sept. 19	Frank Cook, section man, Belle River.	Belle River.	While driving spike it flew and struck him on shin bone.	Leg injured.
Sept. 19	John O'Neill, labourer, Charlottetown.	Royalty Junction.	While replacing a car at Royalty Junction was struck by piece of timber.	Leg injured.
Oct. 9	Albert Boyle, section man, Conway.	Portage.	While unloading ties a tie slipped and fell on his foot.	Foot injured.
Dec. 10	John McEachern, carpenter, Charlottetown.	Charlottetown.	Had index finger cut off by circular saw.	Index finger cut off.
1914.				
Jan. 27	James A. McNeill, blacksmith's helper, Charlottetown.	Charlottetown.	Injured wrist while welding tubes.	Wrist injured.
Feb. 3	B. Parker Moore, machinist, Charlottetown.	Charlottetown.	While going from round house to forge, slipped on ice.	Back injured.
Feb. 20	Samuel Graham, section man, Coleman.	Coleman.	Bruised arm while shovelling snow.	Arm bruised.
Mar. 23	James Redmond, section man, Lake Verde.	Lake Verde.	While walking along the road slipped.	Ankle sprained.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

ACCIDENTS during period ended March 31, 1914.

Cause of Accident.	PASSENGERS.		EMPLOYEES.		OTHERS.		TOTAL.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1. Fell from cars or engine.....								
2. Jumping on or off trains while in motion.....								
3. At work on or near the track making up trains.....								
4. Putting arms or heads out of windows.....								
5. Coupling cars.....								
6. Collisions or by trains thrown from track.....								
7. Struck by engines or cars on highway crossings.....								
8. Walking, standing, lying, sitting, or being on track.....								
9. Explosions.....								
10. Striking bridges.....				18				18
11. Other causes.....				18				18
Total.....								

STATEMENTS OF THE COMPTROLLER AND TREASURER.

No. 1—INTERCOLONIAL RAILWAY.

CAPITAL Account, year ended March 31, 1914.

1913.	Dr.	\$ cts.	\$ cts.	1913.	Cr.	\$ cts.
Mar. 31..	To cost of Intercolonial Railway to date. Strengthen bridges. To increase accommodation and provide machinery, Halifax. Locomotive and car shops with equipment, Moncton. Sydney Mines diversion. Division of line and branch at wharf, Chatham. Increase accommodation at Truro. Surveys and inspection. Increase accommodation at Ste. Flavie. Improvements at Point Tupper. Increase accommodation at Fredericton. Improvements at Sussex. Spur line to Wallace Harbour. Increase accommodation at Mulgrave. Rolling stock. Improve triple valves of air brakes. General protection of highways. Division of line between Nelson and Derby Junction. Increase accommodation and facilities along the line. Increase water supply. Spur line to Courtney Bay, St. John. New terminal facilities, Halifax. Spur line, Pugwash. Double tracking, Chaudiere Curve to St. Ro- muald. New station, Bathurst. Furnishings for office building, Moncton. Docks and wharves, Halifax. Improvements at Lewis. Elimination of level crossings and grades, Moncton. Increase accommodation at St. John. Increase accommodation at Riviere du Loup. Division of line between North Sydney and Leitch Creek. Installation of block system in connection with operation.	134,582 34 107,485 41 132,170 25 17,306 93 45,271 77 91,008 50 40,000 00 10,923 83 69,842 64 19,990 68 30,454 48 168 61 14,204 95 993,380 18 7,150 00 33,532 52 22,055 21 128,203 83 23,851 32 1,257 35 1,033,834 40 58,000 00 43,098 75 9,611 61 2,499 66 308,769 28 58,025 18 25,949 49 20,000 00 42 32 33,080 32 55,183 98	97,137,807 17	Mar. 31..	By Dominion of Canada	97,137,807 17

SESSIONAL PAPER No. 20

Installation of telephone system in connection with operation.....	39,270 66			
Installation of cork roofing at Moncton.....	143 69			
Electrical equipment for charging electric lighted cars, Halifax.....	1,807 00			
Provide new car ferry and dock for same, Mulgrave.....	1,689 67			
Additional facilities at Riviere du Loup.....	171 63			
Safety appliances for equipment.....	17,289 38			
Original construction.....	35 37			
Towards the construction of a railway from a point at or near Dartmouth in the County of Halifax, via Musquodoboit to Deans Settlement in the said County.....	700,656 69			
Ct.				
By additional sidings and spur line—			1914.	
Previous year's expenditure.....	\$ 305 20		Mar. 31...	By Dominion of Canada.....
Previous year's expenditure (sale of bridge).....	2,000 00	2,305 20	4,329,694 68	4,329,694 68
			101,467,501 85	101,467,501 85

S. L. SHANNON,
Comptroller and Treasurer.

E. & O.E., MONCTON, N.B.

5 GEORGE V., A. 1915

No. 2.—INTERCOLONIAL RAILWAY.

REVENUE Account, year ended March 31, 1914.

Working Expenses.	\$	cts.	\$	cts.	Earnings.	\$	cts.
Maintenance of Way and Structures.....			2,183,377	89	Passenger earnings....	3,674,878	75
Maintenance of Equipment.....	2,623,125	92			Freight earnings.....	8,469,590	33
Add surplus for year transferred to Renewal of Equipment and debited to this Account.....	179,362	78	2,802,488	70	Mail and Express earn- ings.....	549,865	09
Traffic expenses.....			2,883,268	01	Miscellan. earnings....	184,214	83
Transportation expenses.....			7,287,862	46			
General expenses.....			310,251	94			
			12,867,249	00			
Balance.....	190,662	78					
Less surplus transferred to renewal of Equipment Account.....	179,362	78	11,300	00			
			12,878,549	00		12,878,549	00

E. & O. E., MONCTON, N.B.

S. L. SHANNON,
Comptroller and Treasurer.

No. 3.—INTERCOLONIAL RAILWAY.

MAINTENANCE of Way and Structures, year ended March 31, 1914.

	\$	cts.
No. 1. Superintendence.....	109,758	91
" 2. Ballast.....	88,866	78
" 3. Ties.....	279,719	43
" 4. Rails.....	178,024	46
" 5. Other Track material.....	127,445	62
" 6. Roadway and Track.....	757,218	54
" 7. Removal of snow, sand and ice.....	125,210	73
" 9. Bridges, trestles and culverts.....	66,498	47
" 10. Over and under grade crossings.....	2,142	12
" 11. Grade crossings, fences, cattle guards and signs.....	48,739	58
" 12. Snow and sand fences, and snow sheds.....	5,953	81
" 13. Signals and interlocking plants.....	9,672	03
" 14. Telegraph and telephone lines.....	4,520	87
" 16. Buildings, fixtures and grounds.....	285,509	31
" 17. Docks and wharves.....	36,214	23
" 18. Roadway tools and supplies.....	18,540	08
" 22. Injuries to persons.....	2,193	53
" 23. Stationery and printing.....	12,338	98
" 25. Other expenses.....	238	87
" 26. Maintaining joint tracks, yards and other facilities. Dr.....	32,488	61
	Cr.	
" 27. Maintaining joint tracks, yards, and facilities. Cr.....	2,191,321	96
		7,944
		2,183,377
		89

E. & O. E., MONCTON, N.B.

S. L. SHANNON,
Comptroller and Treasurer.

SESSIONAL PAPER No. 20

No. 4.—INTERCOLONIAL RAILWAY.

MAINTENANCE of Equipment, year ended March 31, 1914.

	\$ cts.
No. 28. Superintendence	78,021 45
" 29. Steam locomotives—Repairs.....	890,397 89
" 30. Steam locomotives—Renewals.....	213 050 13
" 35. Passenger train cars—Repairs.....	317,607 50
" 36. Passenger train cars—Renewals.....	106,524 99
" 38. Freight train cars—Repairs.....	860,932 92
" 39. Freight train cars—Renewals.....	159,787 66
" 44. Floating equipment—Repairs.....	6,646 21
" 47. Shop machinery and tools.....	51,961 60
" 49. Injuries to persons.....	2,191 92
" 50. Stationery and printing.....	15,037 21
" 51. Maintaining joint equipment at terminals—Dr.....	6,264 84
" 52. Other expenses.....	35,932 60
" 53. Work equipment—Repairs.....	41,807 12
" 54. Work equipment—Renewals.....	16,324 66
	<hr/> 2,802,488 70

E. & O. E., MONCTON, N.B.

S. L. SHANNON,

Comptroller and Treasurer.

No. 5.—INTERCOLONIAL RAILWAY.

TRAFFIC Expenses, year ended March 31, 1914.

	\$ cts.
No. 57 Superintendence.....	63,304 55
" 58 Outside Agencies.....	119,724 73
" 59 Advertising.....	48,632 03
" 60 Stationery and Printing.....	46,873 05
" 61 Traffic Associations.....	4,125 84
" 65 Other Expenses.....	607 81
	<hr/> \$283,268 01

S. L. SHANNON,

Comptroller and Treasurer.

E. & O. E., MONCTON, N.B.

5 GEORGE V., A. 1915

No. 6.—INTERCOLONIAL RAILWAY.

TRANSPORTATION Expenses, year ended March 31, 1914.

	\$	cts.
No. 66 Superintendence.....	91,466	97
67 Despatching Trains.....	202,567	66
68 Station Employees.....	881,369	27
69 Weighing and Car Service Associations.....	1,528	10
72 Station Supplies and Expenses.....	120,611	67
73 Yardmasters and their Clerks.....	53,334	50
74 Yard Conductors and Brakeman.....	209,156	11
75 Yard Switch and Signal Tenders.....	16,774	43
76 Yard Supplies and Expenses.....	22,303	54
77 Yard Engineman.....	182,696	13
78 Engine House Expenses—Yard.....	44,509	73
79 Fuel for Yard Locomotives.....	255,913	62
80 Water for Yard Locomotives.....	12,339	12
81 Lubricants for Yard Locomotives.....	3,210	00
82 Other Supplies for Yard Locomotives.....	2,257	21
83 Operating Joint Yards and Terminals—Dr.....	133,530	65
86 Road Enginemen.....	791,114	37
87 Engine House Expenses—Road.....	340,801	71
88 Fuel for Road Locomotives.....	2,279,326	67
89 Water for Road Locomotives.....	64,691	66
90 Lubricants for Road Locomotives.....	32,157	61
91 Other Supplies for Road Locomotives.....	19,777	83
94 Road Trainmen.....	920,660	53
95 Train Supplies and Expenses.....	243,523	32
96 Interlocking, Block and other Signals—Operation.....	12,496	94
97 Crossing Flagmen and Gatemen.....	20,232	33
98 Drawbridge Operation.....	3,478	02
99 Clearing Wrecks.....	36,954	09
100 Telegraph and Telephone—Operation.....	15,288	78
101 Operating Floating Equipment.....	58,420	80
103 Stationery and Printing.....	77,156	73
105 Other Expenses.....	49,875	54
106 Loss and Damage—Freight.....	84,431	47
107 Loss and Damage—Baggage.....	737	62
108 Damage to Property.....	20,485	26
109 Damage to Stock on Right of Way.....	3,444	10
110 Injuries to Persons.....	18,597	10
111 Operating Joint Tracks.—Dr.....	13,623	45
	\$ 7,340,844	64
Cr.		
No. 84 Operating Joint Yards and Terminals.—Cr.	52,982	18
	\$ 7,287,862	46

E. & O. E., MONCTON, N.B.

S. L. SHANNON,
Comptroller and Treasurer.

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No. 7.—INTERCOLONIAL RAILWAY.

GENERAL Expenses, year ended March 31, 1914.

	\$	cts.
No. 113 Salaries and Expenses of General Officers.....	34,353	42
114 Salaries and Expenses of Clerks and Attendants.....	127,685	30
115 General Office Supplies and Expenses.....	5,012	40
116 Law Expenses.....	11,915	29
118 Relief Department Expenses.....	9,400	00
119 Pensions.....	94,355	36
120 Stationery and Printing.....	21,249	47
121 Other Expenses.....	6,100	70
	\$	310,251 94

E. & O. E., MONCTON, N.B.

S. L. SHANNON,
Comptroller and Treasurer.

No. 8.—INTERCOLONIAL RAILWAY.

GENERAL Stores Account, year ended March 31, 1914.

Dr.	\$	cts.	\$	cts.	Cr.	\$	cts.
To balance, March 31, 1913.....			1,465,157	78	By issues during year ended March 31, 1914.....	4,876,542	90
Purchases during year ended March 31, 1914.....	5,341,463	52			Sales of material, fuel, etc.....	93,000	65
Charges from other departments.....	549,758	12			Sales old material.....	313,590	11
Labour.....	62,798	84					
Staff.....	43,807	57	5,997,858	05	Balance—	1,380,126	64
					Ordinary stores including fuel.....	799,755	44
					Roadway and bridge material.....		
			7,463,015	83			
						2,179,882	08
						7,463,015	83

C. J. BURNS,
Auditor of Disbursements.

March 31, 1914.

S. L. SHANNON,
Comptroller and Treasurer.

No. 9.—INTERCOLONIAL RAILWAY.
GENERAL Balance, year ended March 31, 1914.—*Continued.*

Dr.	\$	cts.	\$	cts.	Cr.	\$	cts.	\$	cts.
Brought forward.....	3,703	64	5,631,824	32	Brought forward.....	24,099	59	6,249,405	80
To Bangor and Aroostook Railway.....		7 06			By Abner Gordon.....		161 79		
Buffalo, Rochester and Pittsburgh Railway.....	158	50			General Car and Machinery Works.....		832 70		
Bessemer and Lake Erie Railway.....		1 49			Charles and Davidson Hill.....		359 81		
Bay of Quinte Railway.....		3 02			T. A. Hurley.....		168 09		
Caracquet Railway.....	13,775	97			Havelock Mineral Springs Company.....		221 72		
Cape Breton Railway.....	334	10			E. W. Hewitly.....		174 04		
Canadian Pacific Railway (General).....	44,491	58			Imperial Oil Company (Siding Account, New Glasgow).....		262 43		
Charlottetown Steam Navigation Company.....		43 50			Imperial Oil Company (Siding Account, Campbellton).....		152 59		
Canadian Pacific Railway (New Brunswick Division).....	7,908	91			Iron Rock Crushed Stone Company.....		3 08		
Central Vermont Railway.....		254 36			International Harvester Company.....		193 10		
Canada Iron Corporation.....	1,473	78			Johnson and McDonald.....		452 85		
Canadian Northern Railway System.....	2,931	23			J. A. Kirkpatrick.....		248 50		
Cincinnati, Hamilton and Dayton Railway.....		15 85			London Guarantee and Accident Company.....		80		
Cleveland, Cincinnati, Chicago and St. Louis Railway.....	1,100	40			Leß, D. Lockhart.....		144 24		
Chicago, Milwaukee and St. Paul Railway.....		87 93			W. S. Loggie and Company.....		59 77		
Chicago, St. Paul, Minneapolis and Omaha Railway.....	56	45			J. A. Likely.....		1,724 34		
Cincinnati Northern Railway.....	63	93			La Cie Industrielle de Rimouski.....		489 42		
Chicago and North Western Railway.....	202	41			P. Lyall and Son, Construction Company.....		432 93		
Canada Railway News Company.....	9	09			La Compagnie de Fonderie and Machinery.....		149 00		
Chicago and Alton Railway.....	429	60			Minudo Coal Company.....		1 30		
Cincinnati, New Orleans and Texas Pacific Railway.....	34	00			Nap. Mercier.....		11 50		
Chicago, Rock Island and Gulf Railway.....		2 38			W. H. Miller.....		154 00		
Chicago, Burlington and Quincy Railway.....	31	58			Miramichi Lumber Company.....		185 67		
Chicago Refrigerator Despatch Line.....	5	22			Montreal Locomotive Works.....		40 00		
Central Railroad of New Jersey.....	47	85			R. W. Murray.....		1 00		
Chesapeake and Ohio Railway.....	62	41			F. M. Murray.....		158 27		
Choctaw, Oklahoma and Gulf Railway.....	16	00			Mapleleaf Lumber Company.....		95 22		
Colorado and Southern Railway.....		0 82			D. H. McKay.....		60 07		
Cudahy Refrigerator Line.....	1	66			W. A. McKay and Company.....		138 00		
Chicago and Eastern Illinois Railway.....	131	21			McLean Milling Company.....		505 08		
Canadian Locomotive Company.....	197	52			Dan McNeil and Sons.....		378 97		
City of Montreal.....	75	00			H. E. McArthur.....		198 10		
Caviechi and Pagano.....		119 45			J. M. McGrath.....		333 14		
Chicago, New York and Boston Refrigerator Company.....	19	61			New Brunswick Telephone Company.....		14 62		
Chicago, Indianapolis and Louisville Railway..	30	30			Nova Scotia Carriage and Motor Car Company.....		117 48		

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Chicago, Cincinnati and Louisville Railway.....	1 26	Nova Scotia Clay Works.....	147 78
Chicago, Indiana and Southern Railway.....	55 15	Northfield Coal Company.....	4 25
Central New England Railway.....	0 22	Prince Edward Island Railway.....	96 26
Colche-ter Coal and Railway Company.....	369 35	Portland Rolling Mills.....	413 13
Chicago, Rock Island and Pacific Railway.....	292 41	Quebec Construction Company.....	151 44
Chicago Great Western Railway.....	227 68	Reed Company Ltd.....	175 66
J. H. Corbett.....	50 61	Restigouche Lumber Company.....	7 10
Chicago, Peoria and St. Louis Railway.....	11 55	Savoie and Company.....	387 62
Coal Blast Transportation Company.....	2 77	Standard Clay Products.....	690 25
Colorado Southern, New Orleans and Pacific Railway.....	9 07	Enoch Steeves.....	194 75
Copper Crown Company.....	45 13	St. John Station Labour.....	488 45
Central of Georgia Railway.....	25 03	James Stevenson.....	134 82
F. A. Cutting Car Company.....	5 34	Charles P. Stephen.....	78 50
Charleston and Western Carolina Railway.....	1 20	Stephen Brothers.....	169 32
City of St. John.....	97 40	Swift and Company (Siding Account).....	105 55
Canada and Gulf Terminal Railway.....	4, 893 27	E. Sinclair Lumber Company.....	255 60
Chicago Junction Railway.....	8 70	B. L. Tucker.....	184 69
Cudany Milwaukee Refrigerator Line.....	19 66	Town of New Glasgow.....	80 00
Canada Cement Company.....	152 00	S. E. Vaughan and Company.....	891 00
Carolina, Clinchfield and Ohio Railway.....	4 35	Alex. Watson.....	356 00
Chicago, Terre Haute and South-eastern Railway.....	0 30	York and Sunbury Milling Company.....	43 45
Chicago River and Indiana Railway.....	0 76		
Calumet, Hammond and Southeastern Railway.....	0 06		
California Despatch Line.....	0 44		
Cook Construction Company, and Wheaton Brothers.....	128 44	By Individuals and Companies—Suspense Led- ger—	37,588 83
Canada Line.....	3 71	Dominion Iron and Steel Company.....	299 70
Canadian Transfer Company.....	10 00	Department of Railways and Canals.....	13,664 56
Dominion Tar and Chemical Company.....	4 66	Frankel Brothers.....	51 87
Department of Justice.....	3 77	H. J. Garson and Company.....	0 50
Department of Public Works.....	2, 656 87	National Transcontinental Railway.....	302 11
Department of Marine and Fisheries.....	1 81 15	Nova Scotia Car Works.....	930 17
Department of Militia and Defence.....	1, 250 04	O'Brien, Doheny Company.....	663 36
Dominion Atlantic Railway.....	7, 045 78	Portland Rolling Mills.....	296 25
Dominion Coal Company.....	676 49		
Dominion and Hudson Company.....	333 91	By Traffic Ledger:—	
Delaware, Lackawanna and Western Railway.....	65 74	Atchison, Topeka and Santa Fe Railway.....	442 62
Duluth South Shore and Atlantic Railway.....	23 76	Boston and Maine Railroad.....	2,758 23
Davison Lumber Company.....	10 10	Boston and Albany Railway.....	23 39
Dominion Express Company.....	138 10	Canadian Northern Railway.....	1,006 91
Department of Railways and Canals (Stores Ac- count).....	28, 586 0	Chicago, Rock Island and Pacific Railway.....	270 92
Detroit, Toledo and Ironton Railway.....	23 80	Chicago, Burlington and Quincy Railway.....	542 56
Alfred Dickie Lumber Company.....	86 45	Chicago Great Western Railway.....	905 54
Denver and Rio Grande Railway.....	5 09	Chicago, Milwaukee and St. Paul Railway.....	3,703 15
Detroit and Toledo Shore Line.....	10 04	Cleveland, Cincinnati, Chicago and St. Louis Railway.....	7 44
T. A. S. DeWolfe and Son.....	128 42	William Outhbertson.....	25 98
M. P. and J. T. Davis.....	40 08		
Carried forward.....	125,414 17	Carried forward.....	9,536 74
	57631,824 32		9,536,203 15

5 GEORGE V., A. 1915

No. 9.—INTERCOLONIAL RAILWAY.

GENERAL Balance, year ended March 31, 1914.—Continued.

To	DR.	\$	cts.	\$	cts.	Cr.	\$	cts.	\$	cts.
Brought forward.....		125,414	17	5,631,824	32	Brought forward.....	9,286	74	6,303,203	15
Department of Labour and Commerce, U.S.A.....			10 70			By Duluth South Shore and Atlantic Railway.....	67	93		
Department of Naval Service.....		238	53			Furness, Withy and Company.....	92	34		
Duluth, Winnipeg and Pacific Railway.....		6	84			Great Northern Railway.....	3,633	08		
Erie Railway.....		326	92			Grand Trunk Pacific Railway.....	1,491	61		
Eastern Steamship Company.....		7	14			Halifax and South Western Railway.....	144	95		
Eglin, Joliet and Eastern Railway.....		82	79			J. F. Healy.....	8	50		
Captain J. A. Farquhar.....		9	60			Illinois Central Railway.....	1,633	89		
Fort Worth and Denver City Railway.....		2	49			Interprovincial Navigation Company.....	13	80		
Frederickton and Grand Lake Railway.....		739	05			Maine Central Railway.....	5,785	52		
Grand Trunk Railway.....		25,375	80			Minneapolis, St. Paul and Sault Ste. Marie Railway.....	727	33		
Galea Signal Oil Company.....		619	85			Northern Pacific Railway.....	1,262	74		
Green Bay and Western Railway.....		3	44			New York Central and Hudson River Rail- way.....	63	78		
Glyveston, Harrisburg and San Antonio Railway.....		4	32			New York, New Haven and Hartford Rail- way.....	430	88		
Gulf Colorado and Santa Fe Railway.....		158	28			Pennsylvania Railroad.....	91	54		
Great Northern Railway Line.....		7	77			Pickford and Black.....	404	80		
Georgia Southern and Florida Railway.....		98	75			Quebec Central Railway.....	89	46		
Grand Rapids and Indiana Railway.....		20	62			Salisbury and Albert Railway.....	19	42		
Georgia and Florida Railway.....		1	98			Teniskaming and Northern Ontario Railway.....	96	01		
Gulf and Ship Island Railway.....		3	99			Toronto, Hamilton and Buffalo Railway.....	8	62		
Gilmore and Pittsburg Railway.....		2	35			Wabash Railroad.....	255	95		
Gray, Smith and Baird.....		34	00						25,708	89
Norton Griffiths Dredging Company.....		774	50							
Georgia Southwestern and Gulf Railway.....			28			By Car Service Ledger—				
Halifax and South Western Railway.....		131,296	24			Cleveland Cliffs Iron Company.....	27	08		
Hampton and St. Martin's Railway.....		415	78			Evansville, Suburban and Newburgh Railway.....	1	50		
Hooking Valley Railway.....		16	78			Kansas Southern and Gulf Railway.....	1	90		
W. C. Hunter.....		300	00			New York Central Lines.....	16	20		
Houston and Texas Central Railway.....		4	39			New Orleans, Mobile and Chicago Railway.....	2	80		
Hood's Quarry Company.....		81	78			National Transcontinental Railway.....	150	00		
Hibbard Construction Company.....		85	65			Piedmont Railway.....	4	05		
Illinois Central Railway.....		267	23						202	53
Imperial Oil Company.....		75	38			By Rents Ledger—				
Indiana Harbour Railway.....		376	70			Canada Railway News Company.....	833	25		
Idaho and Washington Northern Railway.....		2	24			T. B. Cochran.....	3	52		
Kent Northern Railway.....		6,795	44			Dominion Express Company.....	6	25		
Kansas City, Mexico and Orient Railway.....		10	78			Des. L. LeBlanc.....	6	20		
Kansas City Southern Railway.....		28	39			Caldor, Fraser and Company.....	1	00		
Kingau Refrigerator Line.....		11	46							
Londonderry Iron and Mining Company.....		21,370	37							
Lehigh Valley Railway.....		42	64							

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a Western Railway le and Nashville Railway.....	4 81	Atlantic Sugar Refining Company.....	1 00
Lake Shore and Michigan Southern Railway.....	29 23	George Lovett.....	1 25
Long Island Railway.....	2,100 82	G. L. Tullock.....	1 00
Lake Erie and Western Railway.....	2 00	Colonial Coal Company.....	5 00
R. S. Low.....	297 13	D. Chisholm.....	5 00
Loftbieri Lumber Company.....	96 10	Alfred Blake.....	20 00
Moncton and Buctouche Railway.....	3 25	Mrs. P. Hessian.....	1 00
Michigan Central Railway.....	2,054 81		878 47
Maine Central Railway.....	724 56		
John Murphy.....	36 22	By Advances—	
Montmagny Light and Pulp Company.....	11 45	Moncton Carpet and Furniture Company.....	15 50
Thomas Malcolm.....	756 09		15 50
Merchants Despatch Transportation Company.....	4,925 48		
Missouri Pacific Railway.....	10 75		
Minneapolis, St. Paul and Sault Ste. Marie Rail- way.....	49 95		
Missouri, Kansas and Texas Railway.....	61 19		
Maritime Coal, Railway and Power Company.....	91 34		
Maryland and Pennsylvania Railway.....	3 30		
Metropolitan Steamship Company.....	06		
Miramichi Quarry Company.....	31 88		
Morgan's Louisiana and Texas Railway.....	1 75		
Mather Stock Car Company.....	1 07		
Minneapolis and St. Louis Railway.....	20 85		
Mobile and Ohio Railway.....	203 09		
Millerton Station.....	120 37		
Moncton Construction Company.....	333 73		
Roger Miller and Sons.....	901 41		
J. Matfai and Sons.....	236 00		
A. McPherson and Son.....	14 85		
H. F. McDougall.....	16 15		
Reid McManus.....	308 46		
Nelson McDonald.....	10 00		
J. J. McDonald Estate.....	75 00		
New Brunswick Coal and Railway Company.....	15 69		
New York Central and Hudson River Railway.....	20 38		
Newfoundland Railway.....	1,530 02		
New York, New Haven and Hartford Railway.....	358 02		
New York, Chicago and St. Louis Railway.....	502 96		
Nova Scotia Steel and Coal Company.....	181 03		
New Brunswick and Prince Edward Island Rail- way.....	10,227 59		
Northern Pacific Railway.....	9,466 00		
National Despatch—Great Eastern Line.....	9 93		
Northern Central Railway.....	98 25		
Norfolk and Western Railway.....	4 06		
New Orleans and Northeastern Railway.....	142 35		
New York, Ontario and Western Railway.....	1 37		
Carried forward.....	1 20		
	351,218 25	Carried forward.....	6,330,008 54
	5,631,824 32		

No. 9.—INTERCOLONIAL RAILWAY.
GENERAL Balance, year ended March 31, 1914.—*Continued.*

Dr.	\$ c.	\$ c.	Cr.	\$ cts	\$ cts
To	351,218 25	5,631,824 32	Brought forward		6,330,008 54
Nova Scotia Construction Company.....	942 99				
National Labour Congress.....	446 40				
North Shore Line.....	12 50				
Norfolk Southern Railway.....	5 38				
New York, Susquehanna and Western Railway.....	23				
Norwood and St. Lawrence Railway.....	6 20				
Northern New Brunswick and Seaboard Railway.....	408 02				
New Brunswick Cold Storage Company.....	119 75				
New Brunswick Pulp and Paper Company.....	20 35				
Nashville, Chattanooga and St. Louis Railway.....	33 77				
New Orleans, Mobile and Chicago Railway.....	9 29				
New Orleans, Texas and Mexico Railway.....	8 51				
Nova Scotia Car Works.....	20 69				
National Railways of Mexico.....	975 05				
Oregon-Washington Railway and Navigation Company.....	1 84				
Oregon Short Line Railway.....	12 32				
O'Brien, Doherty Company.....	130 00				
Post Office Department.....	81,831 14				
Pictou Station Labour.....	200 00				
Pennsylvania Railroad.....	318 80				
Price Brothers.....	1,336 02				
Pittsburg, Cincinnati, Chicago and St. Louis Railway.....	46 47				
Pennsylvania Company.....	443 19				
Pere Marquette Railway.....	276 38				
Pittsburgh and Lake Erie Railway.....	167 09				
Philadelphia and Reading Railway.....	104 76				
Philadelphia, Baltimore and Washington Railway.....	86				
Pickford and Black.....	162 99				
Pittsburgh, Shawmut and Northern Railway.....	15 10				
Pirie and Sinkovitz.....	13 55				
F. Puddington.....	40 92				
Pacific Fruit Express.....	1 94				
Peerless Transit Line.....	6 07				
Phillips, Mutch and McLean.....	6 15				
Quebec Central Railway.....	7,196 93				
Quebec, Montreal and Southern Railway.....	118 50				
Quebec and Lake St. John Railway.....	70 67				

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Quebec Contracting Company.....	701 40			
Rutland Railroad.....	27 22			
Ryan and MacDonnell.....	2,736 29			
Rockingham Station.....	3 00			
Robert Reford and Company.....	3 32			
Railway Automatic Car Company.....	61 40			
Renous Bridge Lumber Company.....	47 78			
E. R. Reid.....	13 50			
Swift Refrigerator Line.....	14 60			
Sackville Station.....	65 97			
Salisbury and Harvey Railway.....	69,629 11			
Southern Pacific Railway.....	12 17			
Southern Railway.....	508 75			
St. Wenceslas Station.....	7 77			
John Simon.....	3 00			
Seaboard Air Line.....	6 00			
St. Louis and San Francisco Railway.....	924 48			
St. Louis, Iron Mountain and Southern Railway.....	10 75			
St. Louis Southwestern Railway.....	3 17			
St. Joseph and Grand Island Railway.....	3 84			
St. Monique Station.....	10 00			
Santa Fe Refrigerator Despatch.....	89 86			
J. B. Sangster.....	4 39			
Sussex Station.....	25 00			
San Antonio and Aransas Pass Railway.....	1 21			
Shippers Refrigerator Car Company.....	34			
Sandusky Grain Company.....	1 30			
St. John and Quebec Railway.....	10,362 88			
C. E. Smith.....	313 50			
Soper and McDougall.....	351 64			
A. A. Sutherland.....	193 29			
Sydney Lumber Company.....	27 64			
St. Lawrence Pulp and Paper Company.....	16 22			
Teniscouata Railway.....	20 38			
Texas and Pacific Railway.....	1 75			
Toronto, Hamilton and Buffalo Railway.....	8,045 01			
Transcontinental Railway.....	37 85			
Toledo, St. Louis and Western Railway.....	4 28			
Toledo and Ohio Central Railway.....	2 54			
Toledo, Peoria and Western Railway.....	4 13			
Texas and New Orleans Railway.....	123 29			
D. Tremblay.....	49 00			
F. M. Tweedie.....	429 75			
Toronto Construction Company.....	71 94			
Teniskaming and Northern Ontario Railway.....	27 18			
Trinity and Brazos Valley Railway.....	1 59			
Tennessee Central Railway.....	15 11			
Trenton and Gulf Railway.....	69			
Terminal Railroad Association of St. Louis.....				
Carried forward.....	541,737 11	5,031,824 32	Carried forward.....	6,330,008 54

No. 9.—INTERCOLONIAL RAILWAY.

GENERAL Balance, year ended March 31, 1914.—*Continued.*

Dr.	\$	cts.	\$	cts.	Cr.
Brought forward.....	541,737	11	5,631,824	32	Brought forward.....
To					
Turo Engineering Works.....	473	31			
Vandalia Railroad.....	36				
Vicksburg, Shreveport, and Pacific Railway.....	5	06			
Union Pacific Railway.....	34	74			
Virginian Railroad.....	2	03			
Union Tank Line.....	41				
Francois Vaillancourt.....	34	20			
Wabash Railway.....	459	11			
A. N. Whitman and Son.....	75	00			
E. A. Wallberg.....	2	97			
Wallace Stone Quarry Company.....	25	34			
Wabash-Pittsburg Terminal Railway.....	11	55			
Western Maryland Railway.....	14	24			
Washington Southern Railway.....	6	00			
Robert Wilson.....	110	15			
White City Refrigerator Despatch.....	1	30			
Wichita Falls and North Western Railway.....	11	27			
Western Pacific Railway.....	3	28			
Wisconsin and Michigan Railway.....	2	04			
Zanesville and Western Railway.....	15	85			
			543,025	32	
To Individuals and Companies—Suspense Ledger:—					
Cash Sales—General Storekeeper.....	82	01			
Canada and Gulf Terminal Railway.....	1	38			
Nova Scotia Construction Company.....	930	17			
Prince Edward Island Railway.....	221	22			
Wentworth Gypsum Company.....	18	00			
			1,252	78	
To Traffic Ledger:—					
H. & A. Allan.....	638	78			
Canadian Pacific Railway.....	41,119	43			
Canard Steamship Line.....	98	74			
Dominion Steamship Line.....	105	19			
Dominion Coal Company.....	26,387	27			
Department of Militia and Defence.....	0	97			
Department of Labour and Commerce, U.S.A.....	6	65			
Department of Agriculture, Province of New Brunswick.....	20	00			
					6,330,008 54

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Department of Agriculture, Province of Nova Scotia.....	10 00		
Grand Trunk Railway.....	45,512 08		
General Transatlantic Company.....	4 95		
Hamburg-American Line.....	1,099 38		
A. G. Jones and Company.....	9 50		
Northern New Brunswick and Seaboard Railway.....	3,464 46		
Prince Edward Island Railway.....	546 66		
Reid Newfoundland Railway.....	22,573 69		
Robert Reidford Company.....	82 44		
Salvation Army.....	581 54		
Uranium Steamship Company.....	2,107 07		
		144,368 80	
To Car Service Ledger:—			
Acadia Coal Company.....	7 50		
Albany and Hudson Railway.....	4 25		
Aberdeen and Rockfish Railway.....	5 40		
Atlantic and Western Railway.....	3 60		
Atlanta and St. Andrews Bay Railway.....	7 20		
Arkansas South Eastern Railway.....	9 45		
Boyne City, Gaylord and Alpena Railway.....	18 00		
Brinson Railway.....	7 65		
Chicago, Cincinnati and Louisville Railway.....	137 25		
Central Indiana Railway.....	0 05		
Cincinnati, Georgetown and Portsmouth Railway.....	17 55		
Cincinnati, Bluffton and Chicago Railway.....	3 15		
Columbus and Southern Railway.....	1 60		
Canada and Gulf Terminal Railway.....	964 05		
Chicago and Wabash Valley Railway.....	4 50		
Cape Girardeau Northern Railway.....	1 35		
Dominion Atlantic Railway.....	21 00		
Durham and South Carolina Railway.....	1 80		
Dayton, Lebanon and Cincinnati Railway.....	2 25		
East Carolina Railway.....	4 20		
Fernwood and Gulf Railway.....	0 45		
Genesee and Wyoming Railway.....	14 40		
Greenville and Knoxville Railway.....	1 35		
Halifax and South Western Railway.....	23 00		
Jamesstown, Chautauqua and Lake Erie Railway.....	45 50		
Jamesstown, Westfield and Northwestern Railway.....	4 85		
Kansas City, Mexico and Orient Railway.....	6 90		
Kanawha and West Virginia Railway.....	3 60		
Lehigh and New England Railway.....	1 80		
Lorain, Ashland and Southern Railway.....	13 80		
Muscatine North and South Railway.....	8 55		
Missouri, Oklahoma and Gulf Railway.....	42 30		
Missouri and North Arkansas Railway.....	49 05		
	1,437 45	6,320,471 22	
Carried forward.....			6,330,008 54

Carried forward.....

No. 9.—INTERCOLONIAL RAILWAY.

GENERAL Balance, year ended March 31, 1914.—*Continued.*

Dr.	\$ cts.	\$ cts.	Ca.	\$ cts.	\$ cts.
Brought forward.....	1,437 45	6,320,471 22	Brought forward.....		6,330,008 54
To					
New York, Susquehanna and Western Railway.....	4 05				
New Orleans and Great Northern Railway.....	6 75				
Northern New Brunswick and Seaboard Railway.....	467 55				
New Jersey and Pennsylvania Railway.....	13 95				
Pittsburg, Shawmut and Northern Railway.....	26 10				
Potato Creek Railway.....	5 40				
Pittsburg and Susquehanna Railway.....	4 05				
Register and Glenville Railway.....	1 75				
Randolph and Cumberland Railway.....	6 90				
St. Joseph Valley Railway.....	0 45				
St. Louis, Brownsville and Mexico Railway.....	2 70				
Savannah and Statesboro Railway.....	4 20				
Sandersville Railway.....	2 80				
Sydney and Louisville Railway.....	859 35				
Stuttgart and Rice Belt Railway.....	1 40				
Temiscouata Railway.....	23 00				
Temiskaming and Northern Ontario Railway.....	23 40				
Union Railroad.....	31 95				
Valdosta, Moultrie and Western Railway.....	1 35				
Wheeling and Lake Erie Railway.....	8 90				
White River Railroad.....	10 80				
Williamsport and North Branch Railroad.....		2,944 35			
To					
Rents Ledger:—					
Canadian Express Company.....	5 00				
Charles A. Elder.....	0 03				
Miramichi Steam Navigation Company.....	25 00				
Newfoundland Railway.....	1,166 66				
Post Office Department.....	6 25				
Oliver McGinnis.....	0 17				
R. McDonald.....	5 67				
George Scott.....	17 01				
Canadian Express Company.....	6 25				
J. M. O'Brien.....	12 50				
E. Tiffin.....	26 50				
Edmund White.....	5 00				
Wm. Barrie.....	53 67				
Canadian Pacific Railway.....	20 83				
Canadian Pacific Railway.....	645 80				
Canadian Express Company.....	0 02				

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Steamship <i>Granville</i>	25 00		
Mrs. Ryan.....	70 00		
Canadian Express Company.....	0 48		
Miramichi Steam Navigation Company.....	210 00		
Albert Gunn.....	84 00		
James Elliott.....	208 00		
Joseph Cote.....	26 00		
David Rouleau.....	8 00		
Emilie St. Laurent.....	221 00		
Malcolm Samson.....	2 00		
C. Velieux.....	36 00		
N. Lamontagne.....	7 50		
Dame C. W. Carrier.....	252 00		
Misses Camire.....	63 00		
Olivier Gingras.....	12 00		
Maurice Camire.....	11 00		
Mrs. J. Atkinson.....	105 00		
Mrs. L. Roberge.....	112 00		
James Cloutier.....	42 00		
George Cloutier.....	42 00		
Frank Cloutier.....	4 50		
A. Bégun.....	208 00		
Jean Lemothe.....	54 00		
Corporation of Seminary of Rimouski.....	2 00		
Hiram D. McLean.....	1 00		
Hiram D. McLean.....	10 00		
Nathaniel W. Pushie.....	15 00		
Miramichi Lumber Company.....	30 00		
Robert F. Barclay.....	5 00		
James Comeau.....	20 80		
George A. Mason.....	10 00		
Arthur S. Comeau.....	5 00		
Town of Fraserville.....	1 00		
City of Sydney.....	1 00		
Mills Eveleigh Company, Ltd.....	5 00		
Spencer Brothers and Turner.....	5 00		
Department of Public Works of Canada.....	1 84		
Dominion Iron and Steel Company.....	130 00		
Mapleleaf Telephone Company.....	2 00		
J. A. R. Weir.....	11 00		
Mrs. Agnes Weir.....	2 00		
Thomas Sharp.....	3 00		
Henry O'Leary.....	4 00		
Mrs. Charles Gallagher.....	1 00		
E. S. Vye.....	0 25		
James Sproul.....	1 00		
Robert O'Leary.....	4 00		
Thomas Robinson.....	2 00		
Estate of Mrs. Desmond.....	4 00		
Carried forward.....	4,076 73	6,323,415 57	
Carried forward.....			6,330,003 54

5 GEORGE V., A. 1915

No. 9.—INTERCOLONIAL RAILWAY.
GENERAL Balance, year ended March 31, 1914.—*Concluded.*

Dr.	\$ cts.	\$ cts.	Cr.	\$ cts.	\$ cts.
Brought forward.....	4,076 73	6,323,415 57	Brought forward.....		6,330,008 54
To					
Estate of Mrs. J. Williams.....	4 00				
Malcolm Patterson.....	4 00				
John R. Stewart.....	1 25				
William Young.....	8 00				
Charles Richards.....	4 00				
Estate of Patrick McCourt.....	1 00				
Municipality of Amqui.....	1 00				
Estate of D. McEvoy.....	5 00				
Town of Campbellton.....	0 25				
James E. Kelly.....	6 00				
N. Pusnie.....	8 00				
M. McLean.....	15 00				
James A. Kirkpatrick.....	2 00				
John Pineault.....	1 00				
John C. Gass.....	15 00				
George Stone.....	15 00				
John Legere.....	15 00				
J. H. Hickman.....	5 00				
Wm. Currie.....	17 00				
LeClaire and D'Aigle.....	1 00				
D. M. Grant.....	4 00				
W. F. Napier.....	4 00				
Chas. Love.....	2 00				
Town of Dalhousie.....	1 00				
Nova Scotia Telephone Company.....	0 42				
H. F. McDougall.....	5 00				
Norman C. McKay.....	1 00				
W. R. Steeves.....	0 79				
G. W. White.....	3 75				
James H. Adams.....	2 00				
George Cooper and J. P. Cunningham.....	12 50				
Robert Crawford.....	4 00				
B. N. T. Underhill.....	4 00				
Archibald Fraser.....	1 00				
H. McC. Hart.....	30 00				
Thomas Belanger.....	3 00				
Trustees of Y. M. C.A., Campbellton.....	10 00				
Simeon Fortin.....	2 00				
William R. Wilson.....	2 00				
Sydney and Louisburg Railway.....	800 00				
I. B. Shaffner.....	5 00				

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Ralph W. Eastwood.....	10 00		
Town of Rimouski.....	6 00		
Town of Fraserville.....	1 00		
Thomas S. Patillo.....	1 00		
Earnest O. Dufault.....	5 00	5,125 69	
To Advances:—			
H. M. Stevens.....	5 06		
A. R. Smith.....	20 00		
A. M. McLellan.....	16 65		
T. W. Butler.....	500 00		
R. W. Hewson.....	765 00		
W. C. Chalmers.....	30 00		
H. J. McGrath.....	23 05		
J. K. McGrath.....	50 00		
C. Coulombe.....	57 52		
		1,467 28	
		6,330,008 54	
			6,330,008 54

E. & O. E.,

Moxton, N.B.

S. L. SHANNON,

Comptroller and Treasurer.

5 GEORGE V., A. 1915

No. 10—INTERCOLONIAL RAILWAY.

STATEMENT of Receipts and Expenses. Year ended March 31, 1914.

Expenses.			Receipts.	
		\$ cts.		\$ cts.
Maintenance of Way and Structures...		1,973,377 89	Received From Parliamentary appropriations on account of Intercolonial Railway Working Expenses through the Department of Railways and Canals....	12,867,249 00
Maintenance of Equipment.....		2,802,488 70	Balance at credit of Equipment Renewal Account at April 1 1913.....	1,339 77
Traffic Expenses.....		283,268 01	Cash received for sale of old rolling stock..	30,840 88
Transportation Expenses.....		7,287,862 46	Cash received for wheels substituted under new locomotives.....	960 00
General Expenses.....		310,251 94	Balance at credit of Fire Renewal Account at April 1, 1913.	102,763 17
Amount expended for renewal of rolling stock.....		856,406 34	Balance at credit of Rail Renewal Account at April 1, 1913.	228,926 52
Amount expended for renewal of buildings, etc.....		6,490 21		
Amount expended for renewal of rails, etc.....		142,343,73		
Balance:—		13,662,489 28	Balance:—	13,232,079 34
Rail Renewal Account.....	236,582 79			
Fire Renewal Account.....	156,272 96		Equipment Renewal Account.....	823,265 69
		392,855 75		
		14,055,345 03		14,055,345 03

E. & O. E.,
MONCTON, N.B.S. L. SHANNON,
Comptroller and Treasurer.

SESSIONAL PAPER No. 20

No. 11.—INTERCOLONIAL RAILWAY.

Equipment Renewal Account.

	\$ cts.	\$ cts.
On the 1st April 1913, there was a balance to the credit of the Equipment Renewal Account of.....		1,339.77
During the the ended March 31st 1914, there was credited to the Equipment Renewal Account on account of charges to Working Expenses.....		479,362.78
Cash received for sale of old rolling stock.....		30,840.88
Cash received for wheels substituted under new locomotives.....		960.00
There was charged during the year against the above amount:—		
Cost of placing old locomotives offered for sale.....	35.16	
640 Box Cars.....	774,730.00	
100 Platform Cars.....	107,000.00	
100 Hart Convertable Cars.....	128,912.00	
20 Conductors Vans.....	37,600.00	
Cost of inspection of these cars, paid during the year ended March 31st 1914.....	3,390.80	
Air Brake material supplied Contractors for the construction of the above mentioned cars and cars now under construction.....	24,816.44	
Amount expended in Moncton Shops on vans under construction.....	8,129.29	
Material and labour supplied for 50 box cars constructed in Moncton Shop.....	15,213.04	
Material and Labour changing 19 box to stock cars.....	1,900.00	
Material and labour for 1 Flanger under construction in Moncton Shop...	689.86	
1 Baggage Car.....	7,500.00	
2 Postal Car.....	23,120.00	
8 First Class Passenger Cars.....	132,688.00	
2 Composite First Class and Baggage Cars.....	32,030.00	
Cost of Inspection of these Cars.....	1,775.95	
Material and Labour for 3 Colonist Cars constructed in Moncton Shops..	11,671.58	
Material and Labour for 20 Box Baggage Cars under construction in Moncton Shops.....	21,987.69	
Air Brake material supplied Contractors for 3 Baggage Cars.....	72.90	
Material and Labour supplied for Official Car.....	2,396.17	
Equipping Sleeping cars, 'Connaught' and 'Ungava' with fan motors..	111.24	1,335,769.12
Leaving charged against Equipment Renewal Account on the 31st March 1914.....		823,365.69

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

5 GEORGE V., A. 1915

No. 12.—INTERCOLONIAL RAILWAY.

Rail Renewal Account.

On April 1, 1913, there was a balance to the credit of Rail Renewal Account of	\$ 228,926 52
During the year ended March 31, 1914, there was credited to Rail Renewal Account on account of charges to working expenses.....	150,000 00
	<hr/>
	378,926 52
There has been charged during the year against the above amount.....	142,343 73
	<hr/>
Leaving a credit balance to the credit of Rail Renewal Account on March, 31, 1914.....	\$ 236,582 79

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

No. 13.—INTERCOLONIAL RAILWAY.

Fire Renewal Account.

On April 1, 1913, there was a balance to the credit of Fire Renewal Account of—	\$ 102,763 17
During the year ended March 31, 1914, there was credited to Fire Renewal Account on account of charges to working expenses.....	60,000 00
	<hr/>
	162,763 17
There has been charged during the year against the above amount.....	6,490 21
	<hr/>
Leaving a credit balance to the credit of Fire Renewal Account on March 31, 1914.....	\$ 156,272 96

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

SESSIONAL PAPER No. 20

No. 14.—INTERCOLONIAL RAILWAY.

STATEMENT of cash received. Year ended March 31, 1914.

To Balance on hand at April 1, 1913.....	\$43 05	By amounts deposited to the credit of the Honourable Receiver General of Canada during the year ended March 31, 1914.....	\$15,671,117 67
Amounts received during the year and credited as follows:—		Leaving a balance on hand at March 31, 1914, made up as follows:—	
Station Agents.....	9,400,184 08	Vouchers.....	5 26
Traffic Ledger.....	3,458,831 26	Change.....	94
Car Service Ledger.....	426,918 59		
Individuals and Companies Ledger.....	1,448,908 17		
General Ledger.....	912,686 95		
Rents Ledger.....	23,551 77		
	15,671,080 82		
	\$15,671,123 87		\$15,671,123 87

E. & O. E.,
MONCTON, N.B.S. L. SHANNON,
Comptroller and Treasurer.

5 GEORGE V., A. 1915

INTERCOLONIAL RAILWAY.

STATEMENT of Averages. Year ended March 31, 1914.

Mileage of Railway.....	1,456.97
Engine Mileage.....	10,234,923
Total Train Mileage.....	8,344,470
Total Car Mileage.....	122,815,218
Ratio of earnings to gross earnings—	Per cent.
Revenue from transportation.....	98.57
Revenue from operations other than transportation.....	1.43
Gross earnings per mile of railway..... dollars	8,839.27
“ engine mile.....	1.43
“ train mile.....	1.54
“ car mile..... cents	10.49
Ratio of expenses to gross earnings—	Per cent
Maintenance of Way & Structures.....	16.95
Maintenance of Equipment.....	21.76
Traffic Expenses.....	2.20
Transportation Expenses.....	56.59
General Expenses.....	2.41
Expenses per train mile—	
Maintenance of Way & Structures..... cents	26.16
Maintenance of Equipment.....	33.58
Traffic Expenses.....	3.39
Transportation Expenses.....	87.36
General Expenses.....	3.71
Total per train mile.....	154.20
Expenses per mile of railway—	
Maintenance of Way & Structures..... dollars	1,498.57
Maintenance of Equipment.....	1,923.51
Traffic Expenses.....	194.42
Transportation Expenses.....	5,002.07
General Expenses.....	212.94
Total per mile of railway.....	8,831.51
Locomotive and car repairs per locomotive and car—	
Locomotives.....	2,294.84
Passenger Cars.....	606.12
Freight Cars.....	64.37

S. L. SHANNON,

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MONTROX, N.B.

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY.

COMPARATIVE STATEMENT of principal revenue producing freight carried over the Intercolonial Railway in 1912-1913 and 1913-1914.

Description	Year ended March 31, 1913.	Year ended March 31, 1914
	Tons.	Tons.
<i>Products of Agriculture—</i>		
Grain.....	163,273	160,489
Flour.....	209,499	196,092
Potatoes.....	47,530	52,688
Hay.....	79,998	62,872
Apples, fruit and vegetables.....	37,138	24,561
Other mill products.....	56,571	54,076
Other products of agriculture.....	Nil	11,383
Cotton.....	5,103	6,498
<i>Products of Animals—</i>		
Hogs and horses.....	9,032	9,586
Sheep and cattle.....	12,695	15,672
Lambs.....	1,573	1,749
Dressed meats.....	12,872	10,899
Poultry and game.....	691	643
Fish.....	33,012	34,835
Oysters and clams.....	2,297	3,423
Wool.....	2,420	3,042
Hides and leather.....	9,244	10,189
Other packing house products.....		37,701
<i>Products of Mines—</i>		
Coal and coke.....	1,323,096	1,305,047
Ore.....	78,597	75,861
Sand, stone, etc.....	227,605	194,126
Salt.....	10,242	10,082
Slate and granite.....	5,213	1,709
Phosphate.....	19,732	19,963
Other products of mines.....		27,420
<i>Products of Forest—</i>		
Lumber.....	722,721	748,289
Bark.....	14,930	14,855
Cordwood.....	58,114	45,839
Pulpwood.....	207,802	289,865
Woodpulp.....	26,358	36,355
Shingles.....	77,059	65,913
Other forest products.....	142,876	146,350
<i>Manufactures—</i>		
Petroleum and oils.....	32,383	26,984
Sugar.....	66,874	66,785
Iron and steel rails.....	133,126	143,501
Iron, pig and bloom.....	88,178	111,335
Wire rods.....	56,236	19,876
Steel billets.....	121,747	80,766
Other castings and machinery.....	70,409	74,059
Bar and sheet metals.....	104,407	86,922
Brick, lime and cement.....	142,687	139,702
Agricultural implements.....	11,559	10,689
Furniture.....	12,296	13,202
Immigrant effects.....	8,434	4,031
Miscellaneous.....	757,840	831,816
	5,203,469	5,287,740

W. H. ESTANO,
Auditor of Traffic.E. & O. E.,
MONCTON, N.B.S. L. SHANNON,
Comptroller and Treasurer.

5 GEORGE V., A. 1915

INTERCOLONIAL RAILWAY.

STATEMENT of Receipts.

Month	Passenger Traffic.	Freight Traffic.	Mails and Sundries.	Total Revenue
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1913—				
April.....	321,573 20	788,349 36	50,867 21	1,160,789 77
May.....	315,212 29	745,084 03	38,986 81	1,099,283 13
June.....	357,833 92	697,847 44	54,114 12	1,109,795 48
July.....	419,323 63	714,464 24	64,102 37	1,197,890 24
August.....	422,707 78	702,432 54	51,929 49	1,177,069 81
September.....	385,727 79	697,961 33	57,555 76	1,141,244 88
October.....	300,005 84	755,129 54	59,293 69	1,114,429 07
November.....	232,804 90	749,369 47	65,813 57	1,047,987 94
December.....	287,563 76	735,623 07	70,973 22	1,094,160 05
1914—				
January.....	235,515 37	588,483 11	56,324 32	880,322 80
February.....	181,528 61	576,048 37	52,342 05	809,919 03
March.....	215,081 66	718,797 83	111,777 31	1,045,656 80
1913-1914.....	\$ 3,674,878 75¢	\$ 8,469,590 33¢	734,079 92	\$12,878,549 00
1912-13.....	\$ 3,438,447 32¢	\$ 8,628,760 13¢	517,275 24	\$11,984,482 69

W. H. ESTANO,

Auditor of Traffic.

S. L. SHANNON,

*Comptroller and Treasurer.*E. & O. E.,
MONCTON, N.B.

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY.

FREIGHT Statement.

Month.	Local.		Through.		Total.	
	Tons.	Mileage.	Tons.	Mileage.	Tons.	Mileage.
1913—						
April.....	356,370	77,404,700	134,764	59,217,375	491,134	136,622,075
May.....	344,792	62,888,343	133,501	60,743,675	478,293	123,632,018
June.....	315,980	58,538,971	112,272	51,870,146	428,252	110,409,117
July.....	336,702	52,244,099	119,764	63,987,889	456,466	116,231,988
August.....	312,663	55,769,161	128,201	65,633,397	440,864	121,402,558
September.....	315,937	59,250,465	110,870	55,830,385	426,807	115,080,850
October.....	355,882	58,213,083	124,836	61,647,893	480,718	119,860,976
November.....	316,798	58,820,344	137,874	68,335,327	454,672	127,155,671
December.....	300,690	58,739,822	157,540	80,390,572	458,230	139,130,394
1914—						
January.....	262,690	49,176,650	110,619	45,870,743	373,309	95,047,393
February.....	266,335	60,990,983	99,945	42,514,373	366,280	103,505,356
March.....	298,739	55,475,826	133,976	59,188,081	432,715	114,663,907
1913-1914.....	3,783,578	707,512,447	1,504,162	715,229,856	5,287,740	1,422,742,303
1912-1913.....	3,913,373	766,076,712	1,290,096	636,390,814	5,203,469	1,402,467,526

W. H. ESTANO,

Auditor of Traffic.

S. L. SHANNON,

Comptroller and Treasurer.

E. & O. E.,

MONCTON, N.B.

5 GEORGE V., A. 1915

INTERCOLONIAL RAILWAY.

PASSENGER Statement.

Month.	Local.		Through.		Total.	
	Number.	Mileage.	Number.	Mileage.	Number.	Mileage.
1913—						
April.....	289,608	9,152,644	31,756	10,107,892	321,364	19,260,536
May.....	297,680	9,906,728	31,898	11,310,252	329,578	21,216,980
June.....	316,295	12,231,777	34,573	10,491,566	350,868	22,723,343
July.....	384,319	15,414,316	38,695	8,418,649	423,014	23,832,965
August.....	423,127	17,082,782	35,503	7,583,512	458,630	24,666,294
September.....	351,404	13,720,800	40,606	6,823,699	392,010	20,544,499
October.....	302,692	10,246,139	28,360	5,466,719	331,052	15,712,858
November.....	252,181	8,025,673	21,820	3,860,128	274,001	11,885,801
December.....	300,272	10,583,571	25,371	5,556,534	325,643	16,140,105
1914						
January.....	258,191	7,594,993	23,337	5,711,396	281,528	13,306,389
February.....	207,435	6,106,474	14,083	3,696,985	221,518	9,803,459
March.....	254,278	7,357,201	20,027	6,344,866	274,305	13,702,067
1913-14.....	3,637,482	127,423,098	346,029	85,372,198	3,983,511	212,795,296
1912-13.....	3,448,411	121,021,370	314,704	73,610,336	3,763,115	194,631,706

W. H. ESTANO,

*Auditor of Traffic.*E. & O. E.,
MONCTON, N.B.

S. L. SHANNON,

Comptroller and Treasurer.

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY.

STATEMENT showing quantity of the undermentioned articles carried over the Inter-colonial Railway during fiscal year ended March 31, 1914.

Article.	Via Montreal.	Via Ste. Rosalie	Via St. John.	For Local Stations.	Totals.
	Tons.	Tons.	Tons.	Tons.	Tons.
Raw sugar, westbound	1,852	1,419	.....	9,806	13,077
Refined sugar, westbound	8,470	8,813	1,609	24,388	43,280
European freight, westbound via Halifax	10,791	5,813	18,927	20,674	65,205
European freight westbound via St. John	10,496	531	.....	9,506	20,533
European freight, eastbound via Halifax ..	19,831	9,370	26,849	83,583	139,633
European freight, eastbound via St. John	16,965	710	.....	1,201	18,876
Grain for shipment via Halifax	Bush. 724,117	.....	Bush. 966,800	.....	Bush. 1,690,917
Grain for shipment via St. John	1,527,000	.....	.....	.....	1,527,000
	Tons.	Tons.	Tons.	Tons.	Tons.
Fresh Fish	4,424	2,424	3,435	9,361	19,744
Salt Fish	5,503	1,242	1,657	7,810	16,212
Coal .....	.....	26	.....	1,237,550	1,237,576

W. H. ESTANO,

Auditor of Traffic.

E. & O. E.,

MONCTON, N.B.

S. L. SHANNON,

Comptroller and Treasurer.

5 GEORGE V., A. 1915

INTERCOLONIAL RAILWAY.

DESCRIPTIVE Statement of Freight transported during the year ending
March 31, 1914.

Article.	Number.	Tons.
Barrels flour.....	1,960,920	196,092
Bushels grain.....	6,419,560	160,489
Live stock.....	98,207	27,007
Sup. feet lumber.....	1,008,496,030	1,396,767
Coal and other fuel.....		1,350,886
Manufactured goods.....		1,213,108
All other articles.....		943,391
		5,287,740

W. H. ESTANO,

Auditor of Traffic.

S. L. SHANNON,

Comptroller and Treasurer.

E. & O. E.,

MONCTON, N.B.

INTERCOLONIAL RAILWAY.

STATEMENT of coal shipped over the Intercolonial Railway during the fiscal year
ended March 31, 1914.

From	FOR THE WEST.			For Local Stations.	Total.
	Via St. John.	Via Ste. Rosalie	Via Montreal.		
		Tons.		Tons.	Tons.
Stellarton.....		26		516,657	516,683
Westville.....				32,783	32,783
New Glasgow.....				73,684	73,684
Point Tupper.....				126,808	126,808
North Sydney.....				53,369	53,369
Sydney Mines.....				13,724	13,724
Sydney.....				12,987	12,987
Spring Hill Jet.....				183,527	183,527
Maccan.....				186,466	186,466
Norton.....				31,990	31,990
Harcourt.....				1,718	1,718
McGivneys.....				3,837	3,837
		26		1,237,550	1,237,576

W. H. ESTANO,

Auditor of Traffic.

S. L. SHANNON,

Comptroller and Treasurer,

E. & O. E.,

MONCTON, N.B.

SESSIONAL PAPER No. 20

No. 1.—WINDSOR BRANCH RAILWAY.

REVENUE Account. Year ended March 31, 1914.

Expenditure.	\$ cts.	Earnings.	\$ cts.
Maintenance of way and structures ..	26,486 98	Passenger earnings.....	19,018 80
Balance.....	35,030 54	Freight earnings.....	41,336 45
		Mail earnings.....	1,162 27
	61,517 52		61,517 52

S. L. SHANNON,

Comptroller and Treasurer.

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MONCTON, N.B.

No. 2.—WINDSOR BRANCH RAILWAY.

MAINTENANCE of Way and Structures. Year ended March 31, 1914.

	\$ cts.
Superintendence	1,824 60
Ballast	219 49
Ties	4,517 21
Rails	143 06
Other track material.....	1,406 08
Roadway and track.....	12,436 14
Removal of snow, sand and ice.....	435 84
Bridges, trestles and culverts.....	941 93
Grade crossings, fences, cattle guards and signs.....	2,098 26
Signals and interlocking plants.....	5 39
Buildings, fixtures and grounds.....	2,030 24
Roadway tools and supplies.....	191 29
Stationery.....	75 49
Other expenses.....	161 96
	26,486 98

S. L. SHANNON,

Comptroller and Treasurer.

E. & O. E.,

MONCTON, N.B.

5 GEORGE V., A. 1915

No. 3.—WINDSOR BRANCH RAILWAY.

GENERAL Balance. Year ended March 31, 1914.

DR.	\$ cts.	CR.	\$ cts.
To stores department.....	7,000 10	By Dominion of Canada.....	7,000 10

S. L. SHANNON,

*Comptroller and Treasurer.*E. & O. E.,
MONCTON, N.B.

No. 4.—WINDSOR BRANCH RAILWAY.

Months.	Passenger Earnings.	Freight Earnings.	Mail Earnings.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1913—				
April	1,053 86	2,715 95	95 68	3,865 49
May	1,320 91	2,706 60	95 68	4,123 19
June....	1,437 28	2,433 92	95 68	3,966 88
July....	2,127 81	2,719 19	96 91	4,943 91
August	2,092 71	2,594 97	96 90	4,784 58
September....	3,120 61	4,632 29	96 91	7,849 81
October....	1,795 63	6,426 89	96 91	8,319 43
November. —	1,435 11	4,831 48	96 90	6,363 49
December..	1,799 33	3,526 15	96 91	5,422 39
1914—				
January.....	967 83	3,383 22	94 46	4,445 51
February.....	834 18	2,660 16	95 68	3,590 02
March.....	1,033 54	2,705 63	103 65	3,842 82
	19,018 80	41,336 45	1,162 27	61,517 52

E. & O. E.,
MONCTON, N.B.*Comptroller and Treasurer.*

S. L. SHANNON,

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.
CAPITAL Account. Year ended March 31, 1914.

1913.	Dr	\$ cts.	\$ cts.	1913.	Cr.	\$ cts.
Mar. 31.....	To Cost of P. E. I. Railway, to date.....		8,790,794 06	Mar. 31....	By Dominion of Canada.....	8,790,794 06
1914						
Mar. 31.....	To Car ferry, etc.....	117,412 30				
	Increased accommodation and facilities along the line.....	9,163 30				
	Machinery at Charlottetown.....	2,951 52		1914.		
	Original construction.....	5 00				
	Branch line, Harmony to Elmira.....	42 83		Mar. 31....	By Dominion of Canada.....	129,574 95
						129,574 95
						8,920,369 01
						8,920,369 01

E. & O. E.,
MONCTON, N.B.

S. L. SHANNON,
Comptroller and Treasurer.

PRINCE EDWARD ISLAND RAILWAY.

REVENUE Account. Year ended March 31, 1914.

Expenditure	\$	cts.	Earnings.	\$	cts.
Maintenance of way and structures...	160,334	29	Passenger.....	183,649	79
Maintenance of equipment.....	95,622	05	Freight.....	184,004	11
Traffic expenses.....	5,943	46	Mails and express.....	29,120	87
Transportation expenses.....	292,182	66	Miscellaneous.....	12,841	97
General expenses.....	17,332	91		409,616	74
			Balance	161,798	63
	571,415	37		571,415	37

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

PRINCE EDWARD ISLAND RAILWAY.

MAINTENANCE of Way and Structures. Year ended March 31, 1914.

No.		\$	cts.
1.	Superintendence.....	7,593	25
2.	Ballast.....	6,960	39
3.	Ties.....	25,387	21
4.	Rails.....	304	74
5.	Other track material.....	3,691	24
6.	Roadway and track.....	67,730	38
7.	Removal of snow, sand and ice.....	12,192	58
9.	Bridges, trestles and culverts.....	3,942	29
10.	Over and under grade crossings.....	0	25
11.	Grade crossings, fences, cattleguards and signs.....	7,734	82
12.	Snow and sand fences and snowsheds.....	1,604	60
13.	Signals and interlocking plants.....	329	87
14.	Telegraph and telephone lines.....	889	80
16.	Buildings, fixtures and grounds.....	15,881	74
17.	Docks and wharves.....	2,965	21
18.	Roadway tools and supplies.....	2,668	04
23.	Stationery and Printing.....	442	68
25.	Other expenses.....	15	20
		160,334	29

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND.

MAINTENANCE of Equipment. Year ended March 31, 1914.

	\$	cts.
No. 28. Superintendence.....	7,319	03
29. Steam locomotives, repairs.....	37,435	91
35. Passenger train cars, repairs.....	20,915	22
38. Freight train cars, repairs.....	20,123	45
39. " " renewals.....	29	50
47. Shop machinery and tools.....	3,448	99
49. Injuries to persons.....	0	92
50. Stationery and printing.....	451	41
52. Other expenses.....	4,558	68
53. Work equipment, repairs.....	1,338	94
	95,622	05

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

PRINCE EDWARD ISLAND.

TRAFFIC Expenses. Year ended March 31, 1914.

	\$	cts.
No. 57. Superintendence.....	1,758	13
58. Outside agencies.....	3,084	32
59. Advertising.....	903	66
60. Stationery and printing.....	197	35
	5,943	46

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

5 GEORGE V., A. 1915

PRINCE EDWARD ISLAND.

TRANSPORTATION Expenses. Year ended March 31, 1914.

	\$	cts.
No. 66. Superintendence.....	6,099	62
67. Despatching trains.....	5,153	34
68. Station employees.....	70,399	64
72. Station supplies and expenses.....	8,392	97
73. Yardmasters and their clerks.....	2,794	30
74. Yard conductors and brakemen.....	4,330	57
76. Yard supplies and expenses.....	93	07
77. Yard enginemen.....	7,690	89
78. Engine-house expenses, yard.....	639	65
79. Fuel for yard locomotives.....	4,855	31
80. Water for yard locomotives.....	165	00
81. Lubricants for yard locomotives.....	102	63
82. Other supplies for yard locomotives.....	105	54
86. Road enginemen.....	33,879	69
87. Engine-house expenses, road.....	15,176	76
88. Fuel for road locomotives.....	57,892	48
89. Water for road locomotives.....	2,179	83
90. Lubricants for road locomotives.....	1,254	71
91. Other supplies for road locomotives.....	1,250	30
94. Road trainmen.....	41,448	82
95. Train supplies and expenses.....	9,668	08
96. Interlockers, block and other signals, operation.....	164	58
97. Crossing flagmen and gatemen.....	574	48
98. Drawbridge operation.....	641	91
99. Clearing wrecks.....	3,225	82
100. Telegraph and telephone—Operation.....	3,133	88
101. Operating floating equipment.....	243	40
103. Stationery and printing.....	9,056	21
105. Other expenses.....	42	00
106. Loss and damage freight.....	625	78
107. Loss and damage baggage.....	75	00
108. Damage to property.....	245	40
109. Damage to stock on right of way.....	576	00
110. Injuries to persons.....	5	00
	292,182	66

S. L. SHANNON,

*Comptroller and Treasurer.*E. & O. E.,
MONCTON, N.B.

PRINCE EDWARD ISLAND.

GENERAL Expenses. Year ended March 31, 1914.

	cts.
No. 113. Salaries and expenses of general officers.....	4,954 00
114. Salaries and expenses of clerks and attendants.....	6,134 03
115. General office supplies and expenses.....	99 48
116. Law expenses.....	101 80
118. Relief department expenses.....	400 00
119. Pensions.....	5,263 59
120. Stationery and printing.....	358 55
121. Other expenses.....	21 46
	17,332 91

S. L. SHANNON,

*Comptroller and Treasurer.*E. & O. E.,
MONCTON, N.B.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND.

GENERAL Balance. Year ended March 31, 1914.

Dr.	\$	cts.	Cr.	\$	cts.	\$	cts.
To General stores			By Dominion of Canada	67	669 97	90	660 20
Auditors suspense			Unclaimed wages	574	76		50 71
Cash in transit			Individuals and Companies Ledger:—	262	00		
Station agents			John Simon	3	024 90		459 90
To Individuals and Companies Ledger:—			By Traffic Ledger:—				
Canadian Express Company		85 02	Boston & Maine Railroad				78 32
Post Office Department	20	060 52	Canadian Pacific Railway				789 51
R. T. Holman, Limited		2 46	Grand Trunk Railway				149 55
Province of Prince Edward Island		5 07	Intercolonial Railway				804 30
Intercolonial Railway		427 90					
Charlottetown Steam Navigation Company		2 78	By Rents Ledger:—				
Murray Harbour Branch—Telegraph earnings		14 00	Department of Marine and Fisheries, George-				
Canadian Pacific Railway		15 91	town				1 00
Western Union Telegraph Company		832 40					
Grand Trunk Railway		2 86					
Boston and Maine Railroad		1 24					
Anglo-American Telegraph Company		2 55					
				21	452 71		
To Traffic Ledger:—							
Marsters Tours				0	15		
To Rents Ledger:—							
William McLean		1 00					
Department of Marine and Fisheries (Souris)		1 00					
Benjamin Gallant		5 00					
Robert Ellis		1 00					
Haywood & Campbell		1 00					
					9	00	
						92	993 49
							92,993 49

MONCTON, N.B.
E. & O. E.,

S. L. SHANNON,
Comptroller and Treasurer.

5 GEORGE V.. A. 1915

PRINCE EDWARD ISLAND RAILWAY.

GENERAL Stores Account, year ending March 31, 1914.

1913	DR.	\$	cts.	\$	cts.
March 31	To balance brought forward..			71,846	54
1914					
March 31	To purchases during year..	146,777	12		
	Charges from other departments.	13,131	91		
	Labour, etc.....	4,596	32		
	Staff pay rolls.....	2,771	08		
				167,276	43
1914	CR.			239,122	97
March 31	By issues during year..			171,453	00
				67,669	97
	Balance..	Ordinary stores including stationery.....	33,609	95	
		Fuel store.....	19,392	95	
		Road stock store	14,667	07	
			67,669	97	

S. L. SHANNON,

Comptroller and Treasurer.

C. F. BURNS,

Auditor of Disbursements.

E. & O. E.,

MONCTON, N.B.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

STATEMENT of Averages. Year ended March 31, 1914.

Mileage of railway.....		275.2
Engine mileage.....		461,618
Total train mileage.....		317,169
Total car mileage.....		2,313,519
Ratio of earnings to gross earnings—		
Revenue from transportation.....	Per cent	96.86
Revenue from operation other than transportation.....	"	3.14
Gross earnings per mile of railway.....	Dollars.	1,488.43
" " engine mile.....	"	0.98
" " train mile.....	"	1.29
" " car mile.....	Cents.	17.714
Ratio of expenses to gross earnings—		
Maintenance of way and structures.....	Per cent	39.14
Maintenance of equipment.....	"	23.34
Traffic expenses.....	"	1.45
Transportation expenses.....	"	71.33
General expenses.....	"	4.23
Expenses per train mile—		
Maintenance of way and structures.....	Cents.	50.55
Maintenance of equipment.....	"	30.15
Traffic expenses.....	"	1.87
Transportation expenses.....	"	92.12
General expenses.....	"	5.47
		180.16
Expenses per mile of railway—		
Maintenance of way and structures.....	Dollars.	582.61
Maintenance of equipment.....	"	347.46
Traffic expenses.....	"	21.60
Transportation expenses.....	"	1,061.71
General expenses.....	"	62.98
		2,076.36
Locomotive and car repairs, per locomotive and car—		
Locomotives.....	Dollars.	1,207.61
Passenger cars.....	"	354.50
Freight cars.....	"	39.02

S. L. SHANNON,

Comptroller and Treasurer.

E. & O. E.,

MONCTON, N.B.

5 GEORGE V.. A. 1915

PRINCE EDWARD ISLAND RAILWAY.

STATEMENT of Receipts.

Month.	Freight Traffic.	Passenger Traffic.	Mails and Sundries.	Total Revenue.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1913.				
April.....	14,152 04	10,932 34	2,065 75	27,150 13
May.....	20,454 62	10,656 76	1,963 54	33,074 92
June.....	17,497 72	13,947 67	2,145 30	33,590 69
July.....	17,350 97	26,258 98	2,390 50	46,000 45
August.....	13,045 91	24,218 44	7,415 28	44,679 63
September.....	13,073 13	22,484 60	2,315 71	37,873 44
October.....	17,934 00	16,494 41	2,778 34	37,206 75
November.....	23,858 88	13,840 57	2,625 95	40,325 40
December.....	15,030 35	15,243 26	2,763 22	33,036 83
1914.				
January.....	8,624 75	10,088 03	8,402 90	27,115 68
February.....	8,514 47	7,592 46	2,071 27	18,178 20
March.....	14,467 27	11,892 27	5,025 08	31,384 62
1913-14.....	184,004 11	183,649 79	41,962 84	409,616 74
1912-13.....	180,347 31	171,348 57	37,778 19	389,474 07

W. H. ESTANO,
Auditor of Traffic.

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

PASSENGER Statement.

Month.	Local.		Through.		Total.	
	Number.	Mileage.	Number.	Mileage.	Number.	Mileage.
1913.						
April.....	34,869	609,066	312	13,936	35,181	623,002
May.....	31,144	581,677	1,218	59,864	32,362	641,541
June.....	32,227	666,200	2,034	98,238	34,261	764,438
July.....	58,524	1,460,779	3,286	155,190	61,810	1,615,969
August.....	47,942	1,112,290	3,227	183,210	51,169	1,295,500
September.....	44,371	1,235,512	4,119	210,724	48,490	1,446,236
October.....	32,853	679,150	3,704	176,059	36,557	855,209
November.....	33,921	630,092	2,193	102,606	36,114	732,698
December.....	39,913	816,493	1,263	59,887	41,176	876,380
1914.						
January.....	22,874	510,372	848	40,311	23,722	550,683
February.....	16,641	407,802	245	11,831	16,886	419,633
March.....	27,728	604,145	283	13,951	28,011	618,096
1913-14.....	423,007	9,313,578	22,732	1,125,807	445,739	10,439,385
1912-13.....	410,908	8,692,529	22,980	1,098,241	433,888	9,790,770

W. H. ESTANO,
Auditor of Traffic.

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

5 GEORGE V., A. 1915

PRINCE EDWARD ISLAND RAILWAY.

FREIGHT Statement.

Month.	1913-1914.		1912-1913.	
	Tons.	Mileage.	Tons.	Mileage.
April	8,824	328,898	10,921	430,205
May	12,978	478,878	14,054	458,414
June	12,486	469,853	9,382	382,150
July	11,424	457,784	9,441	347,946
August	9,632	336,654	9,853	420,406
September	7,209	273,284	8,090	297,267
October	10,611	405,099	13,794	437,928
November	15,082	513,035	17,458	593,110
December	8,458	510,217	10,788	440,702
January	4,470	214,187	5,378	239,614
February	5,245	214,593	6,030	250,259
March	9,332	390,430	7,595	287,045
	115,751	4,392,912	122,784	4,585,046

W. H. ESTANO,
Auditor of Traffic.

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

COMPARATIVE STATEMENT of principal revenue producing freight carried over the Prince Edward Island Railway, in 1912-13 and 1913-14.

Description.	Year ended March 31, 1913.	Year ended March 31, 1914.
	Tons.	Tons.
Products of Agriculture—		
Grain.....	14,774	11,417
Flour.....	4,192	3,881
Potatoes.....		11,672
Hay.....	4,039	2,776
Apples, fruit and vegetables.....	12,932	196
Other mill products.....	2,492	1,997
Cotton.....	60	74
Products of animals—		
Hogs and horses.....		1,919
Sheep and cattle.....	3,626	3,129
Lambs.....	2,959	512
Dressed meats.....	2,757	6,028
Poultry and game.....		443
Fish.....	3,529	2,875
Oysters.....		954
Wool.....	63	49
Hide and leather.....	604	712
Products of Mines—		
Coal and coke.....	13,730	14,331
Ore.....		2,030
Sand, stone, etc.....	2,629	568
Salt.....		59
Slate and granite.....		
Phosphate.....		1
Products of Forest—		
Lumber.....	14,562	11,977
Bark.....		10
Cordwood.....		1,377
Pulpwood.....		
Woodpulp.....		146
Shingles.....		325
Other forest products.....		
Manufactures—		
Petroleum and oils.....	1,684	1,970
Sugar.....	1,010	1,403
Iron and steel rails.....	646	495
Iron, pig and bloom.....	581	285
Wire rods.....		35
Steel billets.....		1
Other castings and machinery.....	239	877
Bar and sheet metals.....	123	119
Brick, lime and cement.....	2,346	2,205
Furniture.....		896
Immigrant effects.....	751	25
Miscellaneous.....	31,215	27,084
Agricultural implements.....	1,241	898
	122,784	115,751

W. H. ESTAÑO,

Auditor of Traffic.

F. & O. E.,

MONCTON, N.B.

S. L. SHANNON,

Comptroller and Treasurer.

5 GEORGE V., A. 1915

NATIONAL TRANSCONTINENTAL RAILWAY.

GENERAL Balance. Year ended March 31, 1914.

DR.	\$	cts.	CR.	\$	cts.
To General Stores.....	55,557	67	By Dominion of Canada.....	66,397	76
Station Agents.....	1,180	42	Individuals and Companies.....		
Auditor's Suspense Account.....	80	82	Suspense Ledger:—		
Railway Equipment Service.....	7,009	38	Commissioners of the National		
			Transcontinental Railway.....	699	81
	63,828	29		67,097	57
To Individuals and Companies					
Ledger:—					
M. P. & J. T. Davis.....	114	00			
Interoceanic Railway....	2,315	60			
Moncton Construction					
Company.....	17	95			
National Transcontinental					
Railway Commis-					
sioners.....	824	73			
	3,269	28			
	67,097	57			

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

NATIONAL TRANSCONTINENTAL RAILWAY.

REVENUE Account. Year ended March 31, 1914.

EXPENDITURE.	\$	cts.	EARNINGS.	\$	cts.
Maintenance of way and structures.....	46,811	92	Passenger.....	10,244	29
Maintenance of equipment.....	3,482	47	Freight	51,354	95
Traffic expenses.....	197	65	Mail.....	275	52
Transportation expenses.....	42,255	46	Less.....	61,874	76
General expenses.....	1,326	60	Miscellaneous.....	17,240	65
				44,634	11
			Balance.....	49,439	99
	\$ 94,074	10		94,074	10

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

SESSIONAL PAPER No. 20

NATIONAL TRANSCONTINENTAL RAILWAY.

MAINTENANCE of Way and Structures. Year ended March 31, 1914.

	\$	cts.
No. 1. Superintendence.....	2,957	84
3. Ties.....	90	72
4. Rails.....	34	00
5. Other track material.....	680	26
6. Roadway and track.....	27,996	96
7. Removal of snow, sand and ice.....	8,947	33
8. Tunnels.....	395	53
9. Bridges, trestles and culverts.....	20	16
11. Grade crossings, fences, cattle guards and signs.....	271	40
13. Signal and interlocking plants.....	17	50
14. Telegraph and telephone lines.....	1,295	70
16. Buildings, fixtures and grounds.....	1,256	02
18. Roadway tools and supplies.....	2,141	89
23. Stationery and printing.....	29	61
25. Other expenses.....	7	00
26. Maintaining joint tracks, yards and other facilities. Dr.....	700	00
	46,811	92

S. L. SHANNON,
Comptroller and Treasurer.

MONCTON, N.B.
MONCTON, N.B.

NATIONAL TRANSCONTINENTAL RAILWAY.

MAINTENANCE of Equipment. Year ended March 31, 1914.

	\$	cts.
No. 28. Superintendence.....	314	32
29. Steam locomotives—Repairs.....	1,981	95
35. Passenger train cars—Repairs.....	40	19
38. Freight train cars—Repairs.....	162	76
47. Shop machinery and tools.....	107	92
50. Stationery and printing.....	10	69
52. Other expenses.....	476	33
53. Work equipment—Repairs.....	358	31
	3,482	47

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

5 GEORGE V., A. 1915

NATIONAL TRANSCONTINENTAL RAILWAY.

TRAFFIC Expenses. Year ended March 31, 1914.

	\$	cts.
No. 58. Outside agencies.	117	80
59. Advertising ..	18	05
60 Stationery and printing ..	61	80
	197	65

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

NATIONAL TRANSCONTINENTAL RAILWAY.

TRANSPORTATION Expenses. Year ended March 31, 1914.

	\$	cts.
No. 66. Superintendence.....	2,044	75
67. Despatching trains.....	478	76
68. Station employees.....	2,370	99
72. Station supplies and expenses.....	622	87
83. Operating joint yards and terminals. Dr.	1,073	29
86. Road enginemen.....	5,887	46
87. Enginehouse expenses—road...	1,961	80
88. Fuel for road locomotives.....	14,731	08
89. Water for road locomotives.....	2,444	61
90. Lubricants for road locomotives.....	190	39
91. Other supplies for road locomotives...	92	24
94. Road trainmen.....	7,713	39
95. Train supplies and expenses.....	1,253	59
96. Interlockers, block and other signals—Operation...	816	07
99. Clearing wrecks.....	358	73
100. Telegraph and telephone—Operation...	2	99
103. Stationery and printing.....	131	93
105. Other expenses.....	66	31
106. Loss and damage freight.....	14	31
	42,255	46

S. L. SHANNON,
Comptroller and Treasurer.

E. & O. E.,
MONCTON, N.B.

SESSIONAL PAPER No. 20

NATIONAL TRANSCONTINENTAL RAILWAY.

GENERAL Expenses. Year ended March 31, 1914.

	\$	cts.
No. 113. Salaries and expenses of general officers.	1,132	46
114. Salaries and expenses of clerks and attendants ...	113	57
115. General office supplies and expenses	24	77
120. Stationery and printing.	55	80
	1,326	60

S. L. SHANNON,

Comptroller and Treasurer.

E. & O. E.,

Moncton, N.B.

NATIONAL TRANSCONTINENTAL RAILWAY (AS OPERATED BY THE
INTERCOLONIAL RAILWAY.)

General Stores Account, May 1, 1913, to March 31, 1914.

	\$	cts.
Purchases during period.	70,378.14	
Cr.		
By issues during period.	14,820.47	
	55,557.67	
Balance—		
Ordinary stores.	2,482.84	
Fuel store.	5,861.87	
Road stock store.	47,212.96	
	55,557.67	

C. J. BURNS,

Auditor of Disbursements.

S. L. SHANNON,

Comptroller and Treasurer.

E. & O. E., Moncton, N.B.

5 GEORGE V., A. 1915

NATIONAL TRANSCONTINENTAL RAILWAY.

Operated by Canadian Government Railways.

STATEMENT OF RECEIPTS.

Month.	Freight Traffic.	Passenger Traffic.	Mails.	Miscellaneous.	Net Receipts.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1913—					
April.....	2,853 49	818 05	25 62	2,672 01	1,025 15
May.....	2,464 35	839 00	25 62	74 63	3,403 60
June.....	3,303 53	1,159 56	25 62	519 87	3,968 84
July.....	4,486 52	870 81	25 62	108 88	5,491 83
August.....	2,895 00	1,108 37	25 62	622 91	3,496 08
September.....	3,532 88	1,246 77	25 62	1,993 94	2,811 33
October.....	5,281 57	826 31	22 12	699 54	5,430 46
November.....	4,791 48	907 14	22 12	927 37	4,793 37
December.....	4,331 59	885 39	32 12	1,862 07	3,377 03
1914—					
January.....	4,513 45	625 39	22 12	2,583 08	2,577 88
February.....	5,590 35	306 25	21 56	1,738 15	4,180 01
March.....	7,310 74	651 25	11 76	3,805 22	4,168 53
	51,354 95	10,244 29	275 52	17,240 65	44,634 11

W. H. ESTANO,

*Auditor of Traffic.*E. & O. E.,
MONCTON, N.B.S. L. SHANNON,
Comptroller and Treasurer.

NATIONAL TRANSCONTINENTAL RAILWAY.

Operated by Canadian Government Railways.

FREIGHT AND PASSENGER TRAFFIC.

	Passenger Traffic.		Freight Traffic.	
	Number.	Mileage.	Tons.	Mileage.
1913—				
April.....	530	22,836	2,666	193,769
May.....	612	26,435	1,815	178,256
June.....	772	48,931	3,537	274,462
July.....	577	34,550	4,048	377,439
August.....	655	47,518	3,571	327,856
September.....	878	60,522	2,282	257,790
October.....	814	37,083	3,977	410,803
November.....	886	33,061	3,898	359,874
December.....	719	40,697	4,047	286,684
1914—				
January.....	480	31,466	5,271	319,400
February.....	300	16,215	7,230	530,186
March.....	677	25,441	8,807	569,627
	7,900	424,755	51,149	4,086,146

E. & O. E.,
MONCTON, N.B.S. L. SHANNON,
Comptroller and Treasurer.

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NATIONAL TRANSCONTINENTAL RAILWAY.

COMPARATIVE STATEMENT of principal revenue producing freight carried over the
National Transcontinental Railway for year ending March 31, 1914.

Description.	Tons.
<i>Products of Agriculture—</i>	
Grain.....	224
Flour.....	20
Potatoes.....	3,675
Hay.....	323
<i>Products of Animals—</i>	
Hogs and horses.....	76
Sheep and cattle.....	Nil.
Lambs.....	"
Dressed meats.....	"
Poultry and game.....	"
Fish.....	13
Oysters and clams.....	Nil.
Wool.....	"
Hides and leather.....	19
Other packing house products.....	Nil.
<i>Products of Mines—</i>	
Coal and coke.....	14,315
Ore.....	Nil.
Sand, stone, etc.....	156
Salt.....	Nil.
Slate and granite.....	"
Phosphate.....	1,237
Other products of mines.....	Nil.
<i>Products of Forests—</i>	
Lumber.....	14,137
Other forest products.....	9,120
<i>Manufactures—</i>	
Oil.....	29
Sugar.....	167
Iron and steel rails.....	71
Iron, pig and bloom.....	101
Other castings and machinery.....	618
Bar and sheet metals.....	115
Brick, lime and cement.....	721
Agricultural implements.....	13
Furniture.....	Nil.
Miscellaneous.....	6,003
	51,149

S. L. SHANNON,

Comptroller and Treasurer.

E. & O. E.,

MONTON, N.B.

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INTERCOLONIAL AND PRINCE EDWARD ISLAND RAILWAYS.

EMPLOYEES' PROVIDENT FUND.

SEVENTH ANNUAL REPORT.

MONCTON, N.B., May 30, 1914.

To all Officers and Employees, Contributors to the above Fund:

GENTLEMEN,—By instruction of the Provident Fund Board we beg to submit for your information the following report of the operations of the Provident Fund for the fiscal year ended March 31, 1914.

The personnel of the Provident Fund Board for that year was as follows:—

F. P. Gutelius, general manager, Canadian Government Railways, chairman, Moncton, N.B.

Appointed by the Minister.

T. C. Burpee, Engineer of Maintenance, I.C.R., Moncton, N.B.

D. McDonald, Superintendant, I.C.R., Lévis, Que.

Elected by the Employees.

Willard P. Hutchinson, train despatcher, I.C.R., Moncton, N.B.

Bliss A. Bourgeois, chief clerk, I.C.R., Moncton, N.B.

Four regular meetings of the Board, as required by the regulations, were held during the year.

The following is a statement of the Receipts and Expenditures during the year ended March 31, 1914:—

Balance at the Credit of the Fund on the 31st March, 1913	\$ 346,028 57
The Contributions made by Employees during the year, being one and one-half per cent of their monthly salary and wages, were	\$ 99,805 03
The Contributions made by the Railways, of an equal amount during the same period, were	99,805 03
	199,610 06
Amount received for Refunds, etc.	1,236 00
Interest accrued (at three per cent)	*10,048 32
	\$ 556,922 95
The Expenditures were:	
For retiring allowances	\$ 152,674 81
For contributions refunded in cases of deceased employees	3,708 02
For contributions refunded, which were deducted in error	335 98
For contributions refunded to discharged employees, etc.	2,325 75
Medical Examinations for probationers entering service, etc.	2,808 00
Medical Examinations for employees retiring from service	87 00
For Election Expenses	583 19
For Salaries and Travelling Expenses, Secretary's Office	3,961 43
For Board Members—Time Lost and Travelling Expenses	15 19
For Stationery, Printing, Postage, etc., etc.	1,201 82
	\$ 167,701 19
Balance to the credit of the Fund on the 31st March, 1914	\$ 389,221 76

The following statement shows the amount which was contributed by the railways, and the amount which was contributed by the employees to the Provident Fund, in each fiscal year, since the fund has been in operation. It also shows the number of employees retired, the number of deaths among the same, and the amount \$43.86 of this amount was earned last year, but was not credited until this.

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paid for retiring allowances in each year. The average amount of the retiring allowances, paid in the month of March in each year, is also shown.

For Fiscal Year.	Amount contributed by Railways.	Amount contributed by Employees.	No. of Employees placed on Fund.	No. of Retired Employees Died.	Amount Paid for Retiring Allowances.	Average Monthly Allowance Paid in March.	Balance at Credit of Fund.
1907-8.....	\$82,707 74	\$82,707 74	142	11	\$23,913 04	\$25-49	\$139,249 21
1908-9.....	75,306 41	75,306 41	88	17	64,067 63	25 63	225,898 31
1909-10.....	69,949 70	69,949 70	168	17	103,628 20	26 30	255,585 08
1910-11.....	71,296 42	71,296 42	51	23	121,014 34	26 56	273,480 01
1911-12.....	81,119 81	81,119 81	29	23	125,131 32	26 04	309,234 71
1912-13.....	85,365 23	85,365 23	63	36	133,539 69	26 78	346,028 57
1913-14.....	99,805 03	99,805 03	108	37	152,674 81	27 37	389,221 76

It will be noted by the above statement of Receipts and Expenditures that the amount of the contributions received from the Railways and from the Employees during the year, were..... \$199,610 06
And the Expenditures were..... 152,674 81

Surplus of Contributions over Expenditures..... \$46,935 25

The gross surplus, including interest, to the credit of the Fund on March 31st, 1914, was..... \$389,221 76

The Act provides that two members of the Provident Fund Board shall be elected annually, and it was therefore necessary in January, 1914, to arrange for the election of these two members to serve during the year ending March 31, 1915.

Notice calling for the nomination of candidates was accordingly posted as required by the rule, and the election was held in February, 1914.

The two members elected were:

Bliss A. Bourgeois, chief clerk, I.C.R., Moncton, N.B.

Willard P. Hutchinson, train despatcher, I.C.R., Moncton, N.B.

Since the last annual report was issued, Mr. T. C. Burpee, one of the members of the Board appointed by the minister, has been retired from the service, and Mr. D. McDonald, the other member of the Board appointed by the minister, has been transferred to another position, and it was, therefore, necessary for the minister to appoint two other officials as members of the Board.

The personnel of the Board as at present constituted is as follows:—

F. P. Gutelius, general manager, Canadian Government Railways, chairman, Moncton, N.B.

Appointed by the Minister.

S. L. Shannon, comptroller and treasurer, Canadian Government Railways, Moncton, N.B.

H. H. Melanson, general passenger agent, Canadian Government Railways, Moncton, N.B.

Elected by the Employees.

Willard P. Hutchinson, train despatcher, I.C.R., Moncton, N.B.

Bliss A. Bourgeois, chief clerk, I.C.R., Moncton, N.B.

F. P. GUTELIUS,
Chairman.

W. C. PAVER,
Secretary.

PART IV.

Report of the Government Chief Engineer of the
Western Division of the National Trans-
continental Railway.

MR. COLLINGWOOD SCHREIBER, C.M.G.

Office of the General Consulting Engineer to the Government and Chief Engineer of the Western Division of the National Transcontinental Railway.

ROOM NO. 150 WEST DEPARTMENTAL BUILDING,

OTTAWA, April 1, 1914.

The Honourable
Frank Cochrane,
Minister of Railways and Canals,
Ottawa, Ont.

SIR,—I have the honour to submit my annual report for the fiscal year ended the 31st of March, 1914, upon the progress made with the works of construction of the western division of the National Transcontinental Railway.

WESTERN DIVISION.

This division extends westward from the western boundary of the Winnipeg joint terminals to the City of Prince Rupert, the Pacific Coast terminus.

For construction purposes, this division is divided into two sections, viz.:—

The "prairie section" extending from Winnipeg to Wolf Creek, a distance of 915 miles.

The "mountain section" commences on the east bank of Wolf creek, running westerly to the city of Prince Rupert, a distance of 830 miles, with terminals around the water front of the city for a further distance of 3.23 miles.

PRAIRIE SECTION.

Very little work has been executed since the period covered by my last annual report towards completing this section. What has been done was mainly for the maintenance of the permanent way, roadbed, buildings and structures, etc., expenditure on which during construction is, under the terms of the agreement with the company, dated July 29, 1913, chargeable to capital account.

The structural works are principally of timber, viz.:—197 wooden bridges and 1,687 wooden culverts.

The permanent structures of steel and concrete are eleven in number, viz.:—

Spans.

Assiniboine river at Winnipeg..	One 90-foot, four 80-foot, one 44-foot.
“ east of Portage la	
Prairie..	Two 88-foot, one 250-foot.
Arrow river..	One 43-foot 5 inches.
Assiniboine river at Lazare.. . .	One 250-foot.
South Saskatchewan river.. . . .	Five 225-foot, one 175-foot, one 125-foot.
Eagle river..	One 60-foot.
Battle river..	One 150-foot, one 70-foot, fifty-one 50-foot.
North Saskatchewan river.. . . .	Three 225-foot, two 150-foot, ten 50-foot, four 40-foot.
Saskatchewan trail..	One 77-foot.
Norton road..	One 78-foot.
Pembina river..	One 240-foot, two 210-foot, four 60-foot.

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The road is equipped with the necessary passenger stations, freight sheds, section houses, bunk houses, water tanks, round houses, machine shops, coaling plants, stock yards, loading platforms and siding accommodation.

There is one overhead crossing of another railway, and twelve crossings of other railways at rail level which are protected by interlocking plant.

A well equipped train service, both passenger and freight, has been in successful operation over the entire section during the past fiscal year, which I understand has been much appreciated by the travelling public, and has proved a great accommodation to the settlers along the line.

The rolling stock of the passenger trains is of the most modern design, well served and efficiently maintained.

MOUNTAIN SECTION.

The works of construction on this section have been energetically carried on during the past fiscal year.

Although the grading is sufficiently advanced to enable the steel ends to be connected within the next few days, giving a rail trackage from Winnipeg to Prince Rupert, the road is far from being finished, temporary lines being constructed around some unfinished cuttings, and in one instance, a track is laid on a 2 per cent grade over an unfinished cutting. It will probably take a couple of months to complete these cuttings. When completed, the track will be laid through them on the permanent line.

Several pile bridges have yet to be filled by train, and owing to the treacherous nature of the soil (a blue hard wet clay) many slides are likely to occur, from time to time, both in the cuttings and embankments, which will cause more or less inconvenience and trouble, and add very considerably to the cost of construction.

There are 13 tunnels, one of which is not completed, but is "shoo flied." Eleven have been lined with concrete for an aggregate length of 6,162 feet.

The structural works embrace 1,388 wooden culverts, 197 wooden bridges and 59 steel bridges.

The culverts and wooden bridges are all built, but only 38 of the steel bridges are completed, viz:—

	Spans.
Wolf creek	Two 40-foot, two 50-foot, three 150-foot.
McLeod river	Two 40-foot, two 70-foot, four 210-foot.
Prairie creek	Nine 50-foot, five 70-foot.
Fiddle creek	One 150-foot, two 225-foot.
Rocky river	One 225-foot.
Athabasca river	Three 225-foot.
Snaring river	Two 225-foot.
Boulder creek	One 60-foot.
Miette river No. 1	One 225-foot.
" No. 2	One 80-foot.
Grants creek	One 66-foot.
Moose river	One 125-foot.
Fraser river No. 1	One 40-foot, one 70-foot, one 175-foot.
Glazier creek	One 90-foot.
McLennans creek	Two 70-foot, one 100-foot.
Sand creek	One 125-foot.

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	Spans.
Little Shuswap river.	One 125-foot.
Rau Shuswap river.	One 30-foot, seven 40-foot, eight 60-foot, one 180-foot.
Cottonwood creek.	One 125-foot.
50 Mile creek.	One 125-foot.
Goat river.	Two 150-foot.
Dome creek.	One 125-foot.
Willow river.	Two 225-foot.
Fraser river No. 2.	Three 225-foot.
Telkwa river.	One 225-foot.
Trout creek.	One 40-foot, one 50-foot, one 70-foot, one 150-foot.
Boulder creek.	One 50-foot, three 70-foot, one 150-foot, two 210-foot.
Porphyry creek.	Five 40-foot, nine 70-foot.
Mud river.	Five 40-foot, six 60-foot.
Sealey gulch.	Seven 40-foot, eight 70-foot.
Skeena river.	Three 70-foot, three 240-foot.
Kitsumkalum river.	One 225-foot.
Zim-a-cord river.	One 225-foot.
Ecstews river.	One 175-foot.
Ex-chom-siks river.	One 225-foot.
Ka-its-siks river.	One 225-foot.
Kyax river.	One 40-foot.
Zanardi rapids.	Three 55-foot, two 125-foot, one 225-foot.

There are eleven more steel bridges under construction as follows:—

	Spans.
Fraser river No. 3.	One 225-foot, three 250-foot.
“ “ 4.	One 100-foot, ten 200-foot, two 250-foot.
Nechaco river.	Three 225-foot.
Bulkley river No. 1.	One 150-foot.
“ “ 2.	Four 88-foot.
Kitwanger river.	One 150-foot.
Porcupine river.	One 80-foot.
Lorne creek.	One 90-foot.
Hardscrabble creek.	One 99-foot.
Phillip's creek.	One 52-foot.
Shames river.	One 66-foot.

In addition to which there are ten steel bridges the construction of which is not yet commenced, viz.:—

	Spans.
Stony creek.	One 99-foot.
Mud river.	Two 80-foot.
Endaco river No. 1.	One 250-foot.
“ “ 2.	One 60-foot.
Prince creek.	One 66-foot.
Ksi-den creek.	One 60-foot.

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SIDINGS.

Ford creek.....	One 50-foot.
Sand creek.....	One 66-foot.
Fiddlers creek.....	One 90-foot.
Kitsunkaylun river (additional span).....	One 150-foot.

In the meantime the trains are crossing these streams on temporary pile bridges.

A large quantity of rip-rap has been placed on the slopes of the embankments that are subjected to the wash of the waters of the several rivers and lakes, and much more has to be done in that direction before the work is complete.

The following are the numbers and nature of buildings erected or in course of erection, viz.:

2 warehouses.	75 station houses.
16 section houses.	3 cooling plants.
3 round houses.	9 bunk houses.
1 carpenter shop.	14 water tanks.
74 tool houses.	3 machine shops.

With the exception of a gap about 16 miles, the track is laid throughout the "Mountain Section," with the necessary siding accommodation at the stations.

The track for a distance of 630 miles has received a lift of ballast, leaving only 200 miles of skeleton track.

In so far as the terminals at Prince Rupert are concerned, nothing has been done excepting the grading, laying down of a few sidings and the construction of a dock.

It is a great satisfaction to me to be able to report that the Government Inspecting Engineers have faithfully and diligently performed the duties of their office. The work is now, however, so far advanced towards completion, that the services of four out of the six will be dispensed with at the end of May next, and I shall be pleased if their record on this railway should result in the early utilization of their services on some other Government work.

I have the honour to be, Sir,
Your obedient servant,

COLLINGWOOD SCHREIBER,

*Chief Engineer Western Division National
Transcontinental Railway.*

PART V.

QUEBEC BRIDGE RECONSTRUCTION.

REPORT OF CHAIRMAN OF BOARD OF ENGINEERS.

BOARD OF ENGINEERS, QUEBEC BRIDGE.

MONTREAL, June 19, 1914.

SIR,—I beg to report progress of work on the construction of the new Quebec bridge for the fiscal year ending March 31, 1914, as follows:—

Substructure.—During the past year Messrs. M. P. and J. T. Davis, the contractors for the substructure have completed the construction of the masonry embraced in their contract, except such work as cleaning and pointing the courses and dressing the bridge seats.

Following are the quantities of work covered by this contract: —

North abutment (alterations)	404.05	cu. yds.
North intermediate pier	1,665.06	" "
North anchor pier	17,736.00	" "
North main pier	31,870.04	" "
South main pier	38,279.04	" "
South anchor pier	16,073.00	" "
South abutment (alterations)	61.01	" "
Total	106,090.00	" "

The work of construction was started in the spring of 1910, but no masonry was laid until 1911

The work performed each year is as follows:

Season of 1911	22,405	cu. yds.
Season of 1912	41,459	" "
Season of 1913	42,226	" "
Total	106,090	" "

This masonry is all faced with heavy granite blocks with a backing of concrete. The main piers have 18 feet of solid granite on the top of each pier, in order to distribute the heavy loads to all portions of the pier. The anchor piers, which are about 140 feet high above ground line, have heavy steel grillages embedded in their bases, which, when connected to the trusses will act as an anchorage for the cantilever spans. The two wells have been left open in each of these piers to enable this connection to be made at the proper time.

The abutments, intermediate pier, south main and both anchor piers are founded on solid rock. In the case of the south main pier the foundations were carried down 86 feet below the bed of the river and 101 feet below extreme high water. It was the original intention to carry the north main pier down to rock, but during the sinking of the caisson the river bed was found to be a solid mass of boulders for the entire depth. When the caissons had been sunk to a depth of about 55 feet below the river bottom, tests were made in this material, the results of which showed that it was capable of sustaining from eight to ten times the load required. It was therefore decided to stop the sinking at this elevation—about 20 feet above rock.

This masonry has been subject to very careful and rigid inspection, and the work as a whole is very satisfactory.

The contractor is now engaged in cleaning the masonry, removing his plant, and generally cleaning up the site. This work should be entirely completed by the end of the present season.

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Superstructure.—During the past year steady progress has been made in the manufacture of the bridge members at the shops of the St. Lawrence Bridge Company. Up to March 31, 1914, the status of the work was as follows:—

Raw material ordered from the mills.	29,356 tons.
Raw material received at the shop.	24,741 “
Finished bridge members manufactured at shop ..	9,991 “
Members delivered at bridge site.	7,484 “
Steel erected and partially riveted.	1,371 “
Material completely erected.	791 “
Estimated total weight required	65,000 “

Owing to the contractors having to start with a new shop and a new organization, progress in this respect has not been as rapid as was hoped, but from now on it is expected that they will be working to full capacity, or in the neighbourhood of about 2,000 tons per month.

In the field the contractor has also been busy, and when the season opens in the spring expects to start on the erection of the cantilever bridge proper. The approach spans from the abutments to the anchor pier have already been erected. All the falsework required for the erection of the anchor arm has been manufactured and shipped to the site. The 1,000-ton erection traveller is practically completed and is expected to start operations some time in May. It is expected that the greater part of the anchor arm, or some 10,000 tons, will be erected this season. Duplicate falsework and duplicate traveller for the south side are now under construction and will be erected as soon as possible on that side of the river. Next year it is expected that erection will take place simultaneously on both sides.

Shop drawings for over half the bridge have been prepared and approved. This part of the work is advanced to such an extent that it is away ahead of the requirements of the shop.

All of which is respectfully submitted.

C. N. MONSARRAT,

Chairman and Chief Engineer.

Hon. J. D. REID,

Acting Minister of Railways and Canals,
Ottawa, Ont.

PART VI.

REPORT OF THE CHIEF ENGINEER OF THE DEPARTMENT

AND

Reports of the Superintending Engineers, Engineers in Charge, and Superintendents of the various Canals, the Engineer in Charge of the Car Ferry Terminals at Cape Tormentine, the Chief Engineer of the Hudson Bay Railway, the Engineer in Charge of the Hudson Bay Railway Terminus at Port Nelson, and the Engineer in Charge of the Dartmouth-Deans Branch of the I.C.R.

FOR THE YEAR 1913-14.

Ernest Marceau, Superintending Engineer, Quebec Canals.

C. D. Sargent, Superintending Engineer, Ontario-St. Lawrence and St. Peter's Canals.

A. T. Phillips, Superintending Engineer, Rideau Canal.

A. J. Grant, Superintending Engineer, Trent Canal.

A. L. Killaly, Acting Superintendent, Trent Canal.

J. L. Weller, Engineer in Charge, Welland Ship Canal.

L. D. Hara, Acting Superintending Engineer, Welland Canal.

J. W. LeB. Ross, Superintending Engineer, Sault Ste. Marie Canal.

F. B. Fripp, Engineer in Charge, Car Ferry Terminals, Cape Tormentine.

J. W. Porter, Chief Engineer, Hudson Bay Railway.

D. W. McLachlan, Engineer in Charge, Hudson Bay Terminus, Port Nelson.

W. A. Hendry, Engineer in Charge, Dartmouth-Deans Branch, I.C.R.

OFFICE OF THE CHIEF ENGINEER.

OTTAWA, April 1, 1914.

SIR,—I have the honour to submit my annual report for the fiscal year ending March 31, 1914.

Attached hereto will be found the annual reports of the superintending engineers of the several canals, the superintendent of the Trent canal, the engineer in charge of the Welland Ship canal, the engineer in charge of the car ferry terminals at Cape Tormentine, the chief engineer of the Hudson Bay railway, the engineer in charge of the Hudson Bay Railway terminus at Port Nelson, and the engineer in charge of the Dartmouth-Deans branch of the Intercolonial railway.

CANALS.

The through water route between Montreal, at the head of ocean navigation, and Fort William and Port Arthur, on the west shore of Lake Superior, comprises 74 miles of canal with 48 locks, and 1,155 miles of river and lake waters, or a total 1,229 miles. The minimum depth of water on this route is 14 feet. From Montreal to Duluth on the southwest end of Lake Superior, the total distance is 1,354 miles, and to Chicago 1,286 miles. A summary of this route will be found in Part VII, together with details of the several works thereon. Connection is made with the Canadian Pacific railway for points west and south at Fort William and Port Arthur (six miles apart). From Fort William a branch of the Grand Trunk Pacific railway makes connection with the National Transcontinental Railway's main line to Winnipeg.

On this through route the approaches to the canals and the channels of the intermediate river reaches are well defined and are lighted with gas buoys under the control of the Department of Marine and Fisheries, admitting of safe navigation, in the hands of competent pilots, both by day and night. The Lachine, Soulanges, Cornwall, Welland and Sault Ste. Marie canals are lighted throughout with electricity and electrically operated. The Farran's Point canal is lighted with acetylene gas.

Of the minor systems, the Murray, Trent, Rideau, and Ottawa River canals may be considered geographically as branches of the through east and west route. In operation, however, these canals serve a distinct traffic of a more local nature. Isolated from the systems just mentioned, the navigation of the Richelieu river, from its junction with the St. Lawrence at Sorel to Lake Champlain, is effected by means of the St. Ours lock and the Chambly canal; while in the extreme east the St. Peter's canal provides communication between the Bras d'Or Lakes of Cape Breton island and the Atlantic Ocean.

Detailed information respecting the several canals is contained in an appendix.

With the exception of the Trent canal, where the construction of an extension of the present system to an outlet on Lake Ontario is still in progress, and the Welland Ship canal, fully described farther on in this report, the work executed during the past year has been almost wholly of the nature of improvements and repairs to existing works.

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LACHINE CANAL.

The most important items of work during the past year have been the continuation of the rebuilding in concrete of the slope and vertical walls between Cote St. Paul and Lachine, which work is now nearing completion; improvements to Lock No. 4 including the rebuilding of a section of the south retaining wall; and the rebuilding of St. Gabriel Shed No. 1 on which the work is well advanced.

SOULANGES CANAL.

At the upper entrance to this canal foundations have been constructed for the breakwater, lighting pier and an extension to the guide pier. The excavation for a new channel which has been under way will, it is expected, be completed by the close of the present season. A small steel rolling bridge has been located over the entrance to regulating basin No. 1, replacing the former floating span.

CHAMBLY CANAL.

At LaRocque's Crossing a new steel swing bridge was erected replacing the former wooden structure. The wooden regulating weir at Foyer's point was replaced by a new concrete structure provided with steel sluices and other improvements. The system of electric lighting along this canal was completed in time for the opening of navigation. At the St. Ours lock three concrete boom piers were completed replacing the former wooden piers.

STE. ANNE'S LOCK.

The work of renewing in concrete the top of the upper pier between the locks was started and it is expected will be completed this season.

CARILLON AND GRENVILLE CANALS.

A portion of the cribwork in the apron of the submerged dam which had been carried away during the spring freshet of 1913 was renewed and lengthened.

BEAUHARNOIS CANAL.

Nine sections of dry wall, aggregating more than half a mile in length, were built along the shores of lake St. Francis, and a considerable portion of the existing walls was repaired.

CORNWALL CANAL.

A large amount of repair work was attended to during the past season such as the rebuilding of a portion of retaining wall, repairs to valves and gates, the renewal of a culvert at Mille Roches, painting steel bridges, etc. The more extensive improvements were the completion of the work started last season on the lower entrance to lock No. 15, where a safe and easy approach is now provided between the lock and the river with enlarged harbour facilities for waiting vessels. The work is also well under way on extensive improvements at the lower entrance to lock No. 20.

FARRAN'S POINT CANAL.

The lower entrance to this canal has been improved by the replacing of a portion of the old cribwork pier by a permanent concrete structure. The length of this pier has also been considerably increased and vessels can now make the entrance with much greater ease than had formerly been possible.

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RAPIDE PLAT CANAL.

With the exception of a small amount of dredging the improvements to the lower entrance of lock No. 24 have now been completed. The canal at this point has been widened and straightened and an approach wall constructed on the north side of the entrance.

GALOPS CANAL.

To provide greater safety at lock No. 28 a contract has been let for the construction of a steel swing bridge which can be swung across the lock and from which a timber bulkhead can be lowered in the event of an accident to the gates. This bridge will be placed early in the coming season.

MURRAY CANAL.

The dredging of this canal to its original depth of 11 feet was completed early in the season. No other improvements of note were made during the year.

RIDEAU CANAL.

A large number of small repairs were attended to during the year such as the renewal of lock gates, pointing of masonry walls, painting of bridges and buildings, etc. Among the more extensive repairs and improvements should be mentioned the rebuilding of the ice-breaker cribs at Hogsback locks, the rebuilding of the upper of the three locks at Long island station, the taking down and rebuilding of the waste weir at Burritts' Rapids lock and the construction of a protecting crib at same point, the renewal in its original location of the retaining dam at Clowes lock, extensive repairs to the dam at Kilmarnoch lock, and the building of two lay-by piers at Poona-malie lock. Dredging of the Perth branch of the canal was carried on throughout the season. Satisfactory water levels were maintained during the entire period of navigation.

TRENT CANAL.

New construction is still in progress on this canal, but the extent of waterway open to navigation remains the same as in the previous year, namely, from Lake Simcoe to Heeleys Falls, sixteen miles east of Hastings.

On the portion of the canal in operation, in addition to numerous minor repairs, maintenance improvements of somewhat greater magnitude were also carried out, such as the rebuilding in concrete of the south end of the dam at Moore's Falls, the dredging of the channel of the Seugog river north of Lindsay, the construction of a small wharf at Atherley on Lake Simcoe, and the deepening of the canal to nine feet through the rock cut at Balsover.

The portion of the Trent canal now under actual construction lies between Trenton, at the westerly end of the Bay of Quinte, and the easterly end of Rice Lake, a distance of $56\frac{1}{2}$ miles. This portion of the canal is known as the Ontario Rice Lake division and for construction purposes has been subdivided into seven sections or contracts. The line of the River Trent has been followed throughout. When completed, this part of the system will comprise $9\frac{1}{2}$ miles of canal, 13 miles of sub-aqueous channels, and 34 miles of deep river. The total rise between the low water level of Lake Ontario and the normal navigation level of Rice Lake is 369 feet. This difference of level is to be overcome by 18 locks. For the control of the river and canal levels 14 dams will be required. At the end of the past fiscal year all the locks had been constructed and 10 of the dams. There will be required in all 18 bridges of which 15 have already been constructed. These bridges with one exception will all be of either the swing or bascule type. The locks are monolithic concrete 175

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feet long and 33 feet wide providing a depth of 8 feet 4 inches of water on the sills, and will accommodate barges of 1,000 tons of about 150 feet long by 30 feet beam, drawing 8 feet of water. The entire work involved comprises the removal of about 1,500,000 cubic yards of earth and 1,250,000 cubic yards of loose and solid rock, and the placing of about 400,000 cubic yards of concrete. The approximate total cost has been estimated at \$6,750,000. Up to March 31, 1914 there had been expended for labour and material the sum of \$4,206,171.52. Complete details in regard to the foregoing will be found in the annual report of the superintending engineer which appears in the appendix hereto.

In addition to the various construction work already noted, considerable preliminary work and investigation have been done on the westerly or Georgian Bay end of the canal. This portion of the route, which lies between Lake Simcoe and Georgian Bay, is known as the Severn River division. A complete survey of this division has been made during the past two years from which plans have been prepared for the work of canalizing the river to the same dimensions as obtain on the Ontario Rice Lake division. After careful consideration of various possible outlets, South Honey Harbour has been adopted as the most satisfactory Georgian Bay terminus. The total length of this division will be 43 miles and will comprise when completed 4 miles of canal, $5\frac{1}{2}$ miles of subaqueous channel, and $33\frac{3}{4}$ miles of deep river and lake navigation. The fall between Lake Couchiching, the northerly arm of Lake Simcoe and Georgian Bay is about 140 feet, which difference of level will be overcome by 5 locks. The regulation of water levels in the river will be provided for by 13 concrete dams. The canal will be traversed by 8 steel bridges, four of which will be swing spans and the remainder fixed. The division has been divided for construction purposes into four sections, two of which are now under contract.

Hydrographic Surveys.—Various surveys have been made from time to time with a view to the future compilation of a reliable set of charts covering the chain of lakes included in the Trent canal system, and so far as the work has advanced the field work has been plotted. It is intended to continue these surveys during the coming season.

WELLAND SHIP CANAL.

The work on the new ship canal is divided into nine sections or contracts, numbered from the Lake Ontario end of the canal. Contracts have been let for sections Nos. 1, 2, 3 and 5, and for a portion of the work on section No. 4 known as section No. 4A. Sections Nos. 1, 2 and 3, extend over a distance of approximately nine miles, or from the Lake Ontario entrance to the canal, near Port Dalhousie, up to and through the town of Thorold, and include the construction of seven lift locks and the building of a short line of railway for the transportation of supplies during canal construction. Work on these three sections is now in progress. Section No. 5 includes the widening and deepening of the existing canal between Allanburg and Port Robinson, or for a distance of about two and one-half miles. The work upon this section has been progressing rapidly. Section No. 4A covers the construction of two reinforced concrete culverts between the old and new canals to replace the open ditches at present existing. Good progress is being made on this part of the work.

In the annual report of the engineer in charge, appended hereto, are given very complete and interesting details in connection with all the work now in progress and in addition to this there is a resumé from last year's report of the general scheme for and principal engineering features in connection with the entire canal.

WELLAND CANAL.

A large number of minor repairs and improvements were made on the canal during the past fiscal year. In addition to these the more extensive improvements include the replacing by reinforced concrete bridges of six old wooden spans at various points

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along the old and new canals and the building of a number of smaller reinforced concrete bridges to carry pedestrian traffic.

PORT COLBORNE ELEVATOR.

During the year, the Government elevator handled 21,441,826 bushels of grain, an increase of 9,839,310 bushels over the quantity handled in the previous year. The net earnings for the year amounted to \$53,047.06 an increase of more than 100 per cent over the previous year's business. Since the erection of this elevator in 1908 the business handled by it has shown a steady and most satisfactory rate of increase.

SAULT STE. MARIE CANAL.

Repairs and improvements made on this canal during the past year include the dredging of a portion of the upper entrance, and the cleaning out of culverts, and general repairs to lock gates. A large lumber shed was erected at the easterly end of the canal grounds.

The freight traffic handled by the canal was the largest on record, aggregating 42,703,641 tons, an increase of 8 per cent over the previous year's figures. The report of the Superintending Engineer gives further traffic statistics of an interesting nature.

ST. PETER'S CANAL.

Work on the construction of the new lock at the Atlantic end of the canal was proceeded with during the past season. After some little steam shovel excavation had been done it was found that the nature of the foundation material encountered was very unsatisfactory and it was deemed advisable to discontinue work on this site. A new location for the lock has been chosen and it is likely that work will be started in this revised location during the coming season. To carry on this work it will be necessary to close the canal to navigation during the entire season. When the work is completed however, the operating facilities at the Atlantic entrance to the canal will be very greatly improved.

RAILWAYS.

CAR FERRY TERMINALS—NORTHUMBERLAND STRAITS.

This work comprises the construction of harbour works, landing piers, etc., at Cape Tormentine, N.B., and Carleton Point, P.E.I., distant 8 miles apart, and the building of about 3 miles of railway connecting the Cape Traverse Branch of the Prince Edward Island Railway with the Carleton Point terminal.

During the past season the dredging of the turning basin at Cape Tormentine was carried on, and considerable timber cribwork was erected. A large quantity of construction materials have been delivered at the site of the work. A considerable quantity of rubble stone will be required at Carleton Point, and a quarry has been opened at Pointe du Chêne, about 40 miles distant, from which an ample supply can be obtained. Thus far no actual work at the ferry terminal has been done. On the branch line railway, the right of way has been fully cleared, and excavation work started.

HUDSON BAY RAILWAY.

The bridge over the Saskatchewan river near Le Pas, which was mentioned in last year's report, has now been completed. Track is laid for the first 102 miles beyond Le Pas, 56 miles of this distance having been fully ballasted and surfaced. The right-of-way has been cleared up to the first crossing of the Nelson river, or for

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a distance of 242 miles, and grading has been practically completed up to the 105th mile. Considerable survey work was carried on during the past winter with a view to bettering the alignment and reducing the cost of construction, and as a result several advantageous changes from the original location are now to be adopted. It is expected that rapid progress will be made during the coming season.

* HUDSON BAY RAILWAY TERMINUS PORT NELSON.

A commencement was made in the work of development at this point. During the winter and spring, plant, materials, supplies and workmen were assembled, and shipped to Port Nelson on the opening of navigation. Some of the steamers employed proved unsuitable for the business, which in conjunction with delays of contractors in the furnishing of lightering plant resulted in great difficulty in handling cargoes. It was necessary that such arrangements for transportation, as were deemed expedient, should be concluded in the early spring; and thereafter, the total lack of communication left no opportunity for readjustment of plans to circumstances. As a result some cargo was brought back through inability to discharge. Two vessels were wrecked. The period, from the arrival of the first vessel until the laying up of floating plant for the winter, was so short that the greatest part of the forees were occupied in landing supplies. Before winter set in such preliminary work as the construction of housing accommodation for the men, warehouses for supplies, drainage works and construction railways were carried out. Work was also pressed on the construction of radio telegraph station, which was brought into operation in the month of February. Lumbering operations were also carried on during the winter, the timber obtained being suitable for temporary structures and ties. Some square timber forming part of the cargo of the wrecked steamer *Alette* was salvaged across the ice.

During the winter a tote road was constructed from the end of railway operations, over which upwards of 150 men reached Port Nelson early in April.

Through the purchase of steamers by the Department, steps have been taken to overcome the difficulties experienced in marine transportation; seventeen voyages having been made to Port Nelson during the season of 1914 without accident.

DARTMOUTH-DEANS BRANCH, I.C.R.

During the past year, work on this line has been progressing satisfactorily. The expenditure to date has amounted to about two-thirds of the total estimated cost, and it is anticipated that by the end of the current year the line will be practically completed. The right-of-way is entirely closed, and grading, which is being carried on at various points along the route, is now nearly complete, the balance remaining being mostly train fill from borrow pits. Track has been laid to 26.5 miles beyond Dartmouth. Satisfactory deposits of gravel have been found along the route and ballasting will be proceeded with during the coming season. The work is under contract with Messrs. M. P. and J. T. Davis.

CHAUDIERE RIVER BRIDGE.

This bridge, which is a double-track structure 760 feet in length, is located on the short connecting line which runs from the south end of the Quebec bridge to the I.C.R. main line. Early in 1912 it was found that the centre or midstream pier was in a dangerous condition, the upstream end of the pier having been badly undermined from scour, causing a considerable settlement at this end of the pier, and a bad crack in the masonry. A thorough examination of the conditions showed that it would be

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necessary to take down and rebuild the pier and carry it down to solid rock formation, supporting the superstructure of the bridge on temporary work during this construction. This work, which was started in the latter part of 1912, has been under way during the past year. The upstream end of the pier has now been removed and rebuilt and the work of reconstructing the other end of the pier has been begun. It is expected that the entire new pier will be completed by the end of next season and temporary supports removed. Mr. Geo. N. Otty is the engineer in charge and the work is being carried out under contract with Messrs. M. P. and J. T. Davis.

SUBSIDIZED RAILWAYS.

A large amount of work has been handled during the year both in the office and in the field in connection with the inspection of subsidized railways. There were during the past fiscal year eighteen such roads under construction distributed over nearly every province in the Dominion.

I have the honour to be, Sir,
Your obedient servant,

W. A. BOWDEN,
Chief Engineer.

A. W. CAMPBELL, Esq.,
Deputy Minister,
Department of Railways and Canals,
Ottawa.

QUEBEC CANALS,
SUPERINTENDING ENGINEER'S OFFICE,
MONTREAL, July 10, 1914.

SIR,—I have the honour to submit herewith my annual report on the works under my charge, for the fiscal year ended March 31, 1914.

The Quebec Canals Division comprises the Lachine and Soulanges Canals on the St. Lawrence route; the Ste. Anne's, Carillon and Grenville Canals on the Ottawa river, and the St. Ours and Chambly canals on the Richelieu river.

Of these the Lachine canal is by far the most important owing to its immediate connection with the harbour of Montreal.

LACHINE CANAL.

Length, $8\frac{1}{2}$ miles; total rise, 45 feet; 5 locks, 270 feet x 45 feet, with 14 feet of water on sills; 5 old locks, 200 feet x 45 feet, with 9 feet of water on sills, still available to navigation.

OPERATION.

Navigation was carried on without interruption throughout last season, no accident of any importance having occurred between the opening on the 22nd April and the closing, which took place on the 8th December, 1913.

REPAIRS AND RENEWALS.

The principal works of repair performed during the year were as follows:—
Spare gates.—

Nineteen pairs of spare gates, which are kept submerged at convenient points, were carefully examined and made ready for an emergency.

Mooring posts.—

One hundred and ten wooden mooring posts were removed and replaced by cast-iron ones set in concrete.

Masonry and concrete work.—

The walls of the locks, weirs and bridge piers were pointed and grouted as far as was possible during the time the canal was unwatered in March and April.

A number of broken coping stones on new locks Nos. 3 and 4 were removed and replaced by re-inforced concrete.

Concrete side-walks were laid at each end of Wellington and Brewster's bridges, and a piece of concrete wall, 300 feet in length, was built between the south abutment of the Grand Trunk Railway bridge at Wellington street and the north west corner of Wellington basin.

Buildings.—

Pretty extensive repairs to the canal buildings were performed during the year. These buildings comprise residences for three foremen in the Mill street yard, shops, both in this yard and on the northwest side of the canal dry dock, statistical officer's and time-keeper's offices; lock and bridge houses and seven sheds.

Life protection appliances.—

All the existing appliances were kept in a safe condition; 75 additional iron ladders were permanently set in the walls of the canal and 85 life-saving sets consisting of a wooden buoy, 50 feet of strong line and a pole 22 feet long, with grappling prongs attached, were placed at different points along the canal banks and at the locks and bridges.

CAPITAL.

Concrete vertical walls.—

Five thousand four hundred lineal feet of wall were built during the season of navigation. Another section about 3,000 feet in length still remains to be done under this contract.

With the exception of a short piece near the Laehine locks, the canal slopes are now lined with concrete, from Cote St. Paul to Laehine.

The work is being done under contract by Messrs. Quinlan and Robertson.

Improvements at lock No. 4.—

This work, which is being done under contract by Messrs. Quinlan, Robertson and Miller, had progressed very satisfactorily last summer. At the close of operations in the fall, all the foundation walls of the new power house and the piers for the weir race ways, had been nearly completed. On the 1st March, 1914, the canal was unwatered and, by the end of the fiscal year, practically all the portions of the work which are to be submerged were in such a state of advancement as to ensure their completion within a couple of weeks. A section of the south retaining wall, about 180 feet long, immediately above the headrace had also been built.

Rebuilding St. Gabriel shed No. 1.—

This shed was burned in April 1913 and is now being rebuilt in steel, with concrete floor. Its size is 750 x 63 feet as against 750 x 40 feet in the old wooden shed.

The steel work was supplied and erected under contract by the Canadian Bridge Co., of Walkerville, Ont., and the roof was put on, also under contract, by the Westmount Plumbing and Heating Co., of Montreal.

DREDGING.

The dredging fleet was engaged during the month of May 1913 in removing stone blasted off the banks of the canal below the Lachine locks, and, also, doing some cleaning a short distance above Cate St. Paul bridge. On the 26th of that month it had reached Coteau Landing and was employed in excavating the new channel in the entrance of the Soulanges canal until the middle of November, when it was sent down to St. Anne, to do some cleaning in the upper entrance to the lock. The vessels went into winter quarters at Montreal on the 26th of that month.

REPAIRS TO VESSELS.

The Quebec canals dredging fleet comprises two steam tugs, the *Frank Perew* and the *Carillon*, one steam spoon dredge, one floating steam derrick, three dump scows, one of which was built during last winter, thirteen flat scows and a floating storehouse.

All these vessels were carefully repaired after the close of navigation in 1913 and were in very good condition when work was resumed in May last.

SOULANGES CANAL.

Length, 14 miles; 5 locks, 270 x 45 feet; 15 feet of water on the sills; total rise 84 feet.

OPERATION.

This canal was opened on the 24th April and closed on the 7th December, 1913.

Navigation on this canal was carried on without interruption throughout last season.

On two different occasions however, serious accidents were only avoided by the presence on the lower gate of lock No. 2, of the Manny protection beams.

The southeast leaf of that gate was struck by the steamer *E. A. Ames*, on May 15, and by the steamer *Majestic* on June 23, 1913.

In both cases a binding piece and the platform on the gate were broken, but the gate proper did not suffer any injury.

The protection beams, however, were so badly bent and distorted as to be of no further use. They nevertheless performed their function very well, preventing the gate from being thrown down, which certainly would have resulted in very considerable damage to the canal banks and lock below, not to mention a serious interruption of navigation.

REPAIRS AND RENEWALS.

Locks.—The mechanism of the Stoney sluices of locks Nos. 2 and 3 was renewed during the winter.

Cast-iron mooring posts.—The work of enlarging the concrete bases of the original mooring posts was continued last year and 21 of them were so repaired.

Canal slopes.—Several hundred yards of stone from the canal quarry were deposited on the slopes at points requiring immediate attention.

Fences.—Two miles of new fences have been built.

Store-keeper's lodgings.—These lodgings, which occupy two stories over the canal store, and which were damaged last fall by a fire in which two women and a child lost their lives, were duly repaired and a temporary life saving ladder provided.

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Painting.—The following buildings and structures were painted during the year. All the lock houses and lock gates, also the electric poles on the whole length of the canal.

INCOME.

Rebuilding end of lower entrance pier.—About 50 feet in length of the south pier forming the lower entrance to this canal, had fallen down in 1912, it having been undetermined by the strong currents existing here at high water.

The necessary appropriation for its rebuilding having been provided, the contract for the work awarded to Messrs. Quinlan and Robertson on September 26, 1912.

After procuring the necessary timber for the cribwork foundation and removing part of the debris, the contractors decided not to proceed any further, the season being too far advanced.

Embankment at regulating basin No. 2.—The outside slope of the embankment at the northeast corner of regulating basin No. 2, which had slid down owing to infiltrations of the basin's water, was carefully reformed and partly sodded before the winter set in. A trench was excavated down to the rock at the foot of the inside slope and filled with concrete. Although the basin has not yet been refilled, it is confidently expected that this very troublesome leak has been stopped for good.

Spare lock gates.—All the spare lock gates, which had been submerged in the protection dock outside of the canal for the last twenty years, were hauled out of the water, repaired and placed on carefully prepared and even beds in regulating basin No. 1. In this connection some expensive patterns had to be procured, as the original ones could not be traced. It is the intention to have a complete set of these patterns made and to purchase spare castings for the lock gates during the present year.

Electric machinery.—Machinery for electrically operating the two small swing bridges at locks Nos. 3 and 4, was designed and the appliances purchased last winter. At the time of writing the motors are practically installed.

Freight shed.—A one story brick building 20 x 30 feet, with concrete floor, was erected on the north bank of the canal, between locks Nos. 1 and 2. It will be used as a temporary shelter for goods received by boat for canal purposes.

Rolling bridge.—A small steel rolling bridge was supplied by the Phoenix Bridge and Iron Works and erected over the entrance to Regulating Basin No. 1, in place of the old wooden floating span, the operating of which was sometimes difficult owing to the fluctuations of the level in the reach.

Equipment.—A 2-stage turbine pump, directly connected to a 10 H.P. electric motor and 200 feet of 2-inch hose were procured for fire protection and watering purposes, and a ¾-inch electric drill, with 10 feet of flexible shaft have been added to the equipment of our machine shop.

CAPITAL.

Protection works at upper entrance.—All the cribwork foundation of the break-water, that of the lighting pier and some 600 feet of that of the extension to the guide pier, were constructed and put in place before the close of navigation last fall. The excavation of the new channel by the Quebec canals dredging fleet also progressed very satisfactorily and it is hoped that the whole of this work will be completed before the winter sets in.

Steel stop logs.—A set of 16 steel stop logs, 47 feet 6 inches in length and 16 inches high, were purchased from the Dominion Bridge Company for use at lock No. 5, in case of accident or when it is desired to unwater the lock or the upper reach. Both ends of the canal are now equipped with reliable stop logs.

STE. ANNE'S LOCK.

Length $\frac{1}{2}$ mile, one lock 240 x 45 feet, with 9 feet of water on the sills. Old lock still available 200 x 45 feet, with 6 feet of water on the sills. Rise 3 feet.

OPERATION.

This lock was opened to navigation on the 22nd April and closed on the 14th December, 1913, no interruption in the passage of vessels having occurred during the season.

REPAIRS.

Besides ordinary maintenance repairs, the following items of work were performed during the year.

Upper guide pier.—The face and rear timbers in this pier were renewed on a length of 200 feet from a course one foot below low water mark to the top. It is the intention to permanently renew the top of this pier in concrete in a year or two.

Buildings.—Both the overseer's and statistical officer's offices and lodgings were painted, the floors renewed and water service installed.

Mooring posts.—Twelve wooden mooring posts were replaced by heavy cast-iron ones.

INCOME.

Upper pier between locks.—The contract for rebuilding in concrete the top of this pier from one foot below low water mark was awarded to the Montreal General Contracting Company, on the 8th October, 1913. Owing to high water in the Ottawa river, the contractors were unable to complete their contract last fall. At the close of navigation, however, the concrete work was built from the pier of the old lock to about 20 feet around the north end of the pier. The work will be continued this summer.

CARILLON AND GRENVILLE CANALS.

Carillon Canal.—Length, $\frac{3}{4}$ mile; 2 locks, 200 x 45 feet, with 9 feet of water on the sills. Total rise 16 feet.

Grenville Canal.—Length, $5\frac{1}{4}$ miles; 5 locks, 200 x 45 feet, with 9 feet of water on the sills. Total rise $45\frac{1}{4}$ feet.

OPERATION.

These canals were opened on April 22, and closed on November 30, 1913. Navigation was not interrupted during the season.

REPAIRS.

There is nothing to record here, under the above heading, beyond general maintenance work.

INCOME.

Lengthening apron of submerged dam.—During the spring freshet last year, a few cribs forming part of the apron of the dam were carried away. It had been the intention to lengthen that portion of this apron so as to bring it in line with the rest of it.

The work was done by day labour under the supervision of the head foreman of the Carillon and Grenville canals and successfully completed at the end of October last.

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ST. OURS LOCK.

Length, $\frac{1}{2}$ mile; one lock, 200 x 45 feet, with $6\frac{1}{2}$ feet water on the sills; rise 5 feet.

OPERATION.

This lock was opened to navigation on the 15th April and closed on the 30th November, 1913. No accidents or interruption of the traffic occurred during the season.

I have to record here the demise of Mr. Alfred Coderre, late overseer of this lock, and the appointment of Mr. François Robillard as his successor.

REPAIRS.

There is nothing to mention beyond the usual maintenance work.

INCOME.

Boom piers.—The three concrete boom piers which could not be completed during the season of 1912, were finished last fall. The replacing of all the wooden piers, both above and below the lock, by permanent concrete ones is now completed and the cost of maintaining them in good condition will, in future, be reduced to a minimum.

CHAMBLY CANAL.

Length, 12 miles; 9 locks, 118 x $22\frac{1}{2}$ feet, with $6\frac{1}{2}$ feet of water on the sills; total rise, 74 feet.

OPERATION.

This canal was opened to navigation on the 22nd April and closed for the winter on the 1st December, 1913, navigation being conducted without interruption during that period.

REPAIRS.

The most important items of work performed here under the above heading were the following:—

Syphon culvert.—One syphon culvert, which was out of order was thoroughly repaired and both inlet and outlet renewed.

Electric lighting.—The electric light line along the canal was completed, there remaining only a short section to build from the new wharf above the Central Vermont Railway bridge, at St. Johns, to the breakwater, a distance of some 800 feet. The switch board in the power station, the delivery of which was long delayed, was finally set in working order for the opening of navigation.

Lock No. 2.—In order to stop leaks through the west wall of this lock, a trench was dug along the rear face of it for its entire length and a coat of concrete laid, 10 inches in thickness, which has made the wall watertight.

Buildings.—The foundation walls and the floor of the saw-mill were renewed, and the old brick floor in the machine shop was removed and relaid in concrete.

Tail-race of waste weir at electric power house.—The lower section of the walls of this tail-race, which were in bad condition, were taken down and rebuilt in concrete on a length of about 100 feet.

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INCOME.

Swing bridge at Larocque's crossing.—The old wooden swing bridge at this point was replaced by a steel span 63 feet long by 14 feet wide, built and erected, under contract, by the Hamilton Bridge Company, Hamilton, Ont. The remodelling of the substructure was done by day labour.

New lock gates.—Two pairs of new lock gates were built by the canal repair staff during the winter.

Regulating weir at Fryer's Point.—The old wooden weir at this point was rebuilt in concrete. The new structure is 47 feet long and 32 feet wide. It is provided with three passageways; the ones at each end, each 10 feet wide, are closed by stop logs over which the water overflows when it rises above normal level, whereas the centre one, 12 feet in width, is provided with steel sluices permitting to drain the canal to the bottom.

Dredging.—A considerable amount of work was done here by the Chambly canal spoon dredge, in deepening the basin above the Central Vermont bridge, at St. Johns. The material excavated was deposited behind the wharf built at that point three years ago by Messrs J. G. Poupore & Co. The basin, referred to is not yet completed and the work will have to be continued for one or two seasons more.

BEAUHARNOIS CANAL.

This canal has been under lease to the Canadian Light and Power Company since 1907 and is no longer under the direct control of the department. Some works connected with it are, however, still maintained by us.

HUNGRY BAY DYKE.

REPAIRS.

The weeds on the whole length (5 miles) of this dyke were cut twice during the summer and two miles of ditches were cleaned. The dyke proper, the road on top of it and the stone walls built as a protection for the lake shore were kept in good order.

The crushed stone purchased in 1912 was used last summer in filling holes and ruts in the macadamized roadway.

LAKE ST. FRANCIS.

INCOME.

Protection of shores.—During the winter, nine sections of dry wall, aggregating 3,810 feet in length were built at such places as required immediate protection. Of this total, 2,100 lineal feet were laid along the south and 1,700 feet along the north shore of the lake.

In addition to this, the walls already built were repaired on a distance of 4,860 feet, a considerable quantity of new stone being used for such repairs.

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VALLEYFIELD DAM.

This dam was built in 1852 in connection with the Beauharnois canal, to close the channel separating the mainland from the Grand Ile de Beauharnois. Its upper side was then lined with cribwork which served as a dock, and this cribwork being in a very dilapidated condition, it was decided to face it with concrete and make the dock a permanent one. The contract for this work was awarded to Messrs. Cossette & Company, on the 26th July, 1913. Work was commenced a few days later, but, owing to lack of proper plant, the contractors did not accomplish anything worth mentioning. The contract has since been cancelled and the work will be executed during the year 1914-15.

The works under the heads of Capital and Income, on the Lachine canal, are under the immediate supervision of Lt. Col. H. R. Lordly, C.E., and Mr. L. S. Pariseau, C.E., is in charge of Capital and Income work on the other canals of this division.

I have much pleasure in stating that both of these gentlemen and the staffs under them have discharged the duties entrusted to them during the last year in a manner very creditable to themselves.

I have the honour to be, sir,
Your obedient servant,

ERNEST MARCEAU,
Superintending Engineer, Quebec Canals.

QUEBEC CANALS.

STATEMENT giving dates of opening and closing of the Quebec Canals during the fiscal year 1913-14.

Canal.	Opening.	Closing.
	1913.	1913.
Lachine Canal.....	April 22.....	December 8.
Soulanges Canal.....	April 19.....	December 7.
Chambly Canal.....	April 21.....	November 30.
St. Ours Canal.....	April 15.....	November 30.
St. Anne's Canal.....	April 19.....	December 4.
Carillon and Grenville Canals.....	April 21.....	November 29.

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LACHINE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of new Lock No. 1 at lower entrance and new Lock No. 5 at upper entrance during the fiscal year ending March 31, 1914.

Months.	New Lock No. 1, Lower Sill.				New Lock No. 5 Upper Sill.			
	Highest.		Lowest.		Highest		Lowest.	
1913.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April.....	40	4	20	6	20	6	17	11
May.....	21	8	18	8	19	9	18	2
June.....	19	0	16	7	18	7	17	0
July.....	16	6	15	9	17	0	16	4
August.....	15	10	14	11	16	4	15	8
September.....	15	7	14	6	15	11	15	5
October.....	16	5	14	5	16	2	15	2
November.....	16	4	15	0	17	2	15	8
December.....	16	6	15	1	16	4	15	6
1914.								
January.....	33	2	17	0	17	2	15	6
February.....	29	2	23	11	16	4	14	2
March.....	28	2	22	9	16	8	13	11

SOULANGES CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 1 at lower entrance and Lock No. 5 at upper entrance during the fiscal year ending March 31, 1914.

Months.	Lock No. 1, Lower Sill.				Lock No. 5, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1913.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April.....	22	5	20	6	18	8	17	6
May.....	21	4	20	1	17	8	17	3
June.....	20	1	18	9	17	8	17	5
July.....	18	9	18	6	17	6	17	3
August.....	18	0	18	0	17	3	16	8
September.....	18	0	17	5	17	0	16	7
October.....	18	2	17	5	16	8	16	4
November.....	18	6	18	0	17	0	16	4
December.....	18	5	18	0	16	6	16	2
1914.								
January.....	19	8	18	2	17	6	16	1
February.....	27	3	19	9	17	2	15	5
March.....	28	2	22	9	16	8	13	11

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CHAMBLY CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 9 at lower entrance and Lock No. 1 at upper entrance during the fiscal year ending March 31, 1914.

Months.	Lock No. 9, Lower Sill.				Lock No. 1, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.
1913.								
April.....	21	6	15	5	13	7	11	5
May.....	15	6	12	7	11	7	9	8
June.....	13	0	10	7	10	6	8	11
July.....	10	10	9	0	9	2	7	11
August.....	10	3	8	9	8	9	7	5
September.....	9	4	8	5	7	10	6	9
October.....	9	11	8	0	8	9	6	9
November.....	9	7	8	2	9	3	7	5
December.....	9	2	8	0	8	11	7	7
1914.								
January.....	9	2	7	10	9	3	8	3
February.....	9	9	8	8	9	5	8	10
March.....	15	4	9	0	11	10	9	4

ST. OURS LOCK.

STATEMENT showing the depth of the river water on the mitre sills of the St. Ours Lock, during the fiscal year ending March 31, 1914.

Months.	Lock No. 1, Lower Sill.				Lock. No. Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.
1913.								
April.....	21	4	15	1	17	0	12	2
May.....	15	9	12	1	12	4	10	1
June.....	12	6	9	3	10	11	9	4
July.....	9	3	8	0	9	6	8	1
August.....	8	2	7	0	9	7	8	1
September.....	8	0	6	6	9	7	8	8
October.....	9	0	6	6	9	10	8	4
November.....	8	9	7	6	9	10	7	10
December.....	8	4	7	7	8	9	7	6
1914.								
January.....	11	2	8	8	8	2	7	5
February.....	11	1	9	7	8	4	8	0
March.....	14	5	10	0	11	0	8	1

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CARILLON CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 1 at lower entrance and Lock No. 2 at upper entrance during the fiscal year ending March 31, 1914.

Months.	Lock No. 1, Lower Sill.				Lock No. 2, Upper Sill.			
	Highest.		Lowest		Highest.		Lowest.	
1913.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April.....	19	7	17	6	17	1	16	4
May.....	19	4	16	2	18	7	15	2
June.....	16	0	13	4	15	4	12	3
July.....	13	2	12	4	12	0	11	0
August.....	12	3	11	6	10	10	10	2
September.....	11	10	11	4	11	0	10	2
October.....	13	8	11	4	13	0	10	10
November.....	14	4	13	2	13	10	12	6
December.....	14	5	13	0	13	11	12	3
1914.								
January.....	13	8	13	0	16	6	12	3
February.....	15	0	12	11	16	5	13	10
March.....	15	2	12	10	13	7	11	5

GRENVILLE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 3 at lower entrance and Lock No. 7 at upper entrance during the fiscal year ending March 31, 1914.

Months.	Lock No. 3, Lower Sill.				Lock No. 7, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1913.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April.....	23	4	21	0	19	4	18	2
May.....	23	11	19	4	20	8	16	11
June.....	19	2	15	6	16	8	13	0
July.....	15	4	13	11	12	11	11	4
August.....	13	10	13	0	11	4	10	3
September.....	13	4	12	9	10	7	9	9
October.....	15	10	12	11	13	6	10	1
November.....	16	10	15	0	14	5	12	7
December.....	17	0	14	11	14	7	12	6
1914.								
January.....	21	6	16	2	12	6	11	2
February.....	23	3	19	5	11	5	10	10
March.....	20	1	15	4	14	0	10	6

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STE. ANNE'S LOCK

STATEMENT showing the depth of the river water on the mitre sills of Ste. Anne's Lock at the lower and upper entrances during the fiscal year ending March 31, 1914.

Months.	Lock No. 1, Lower Sill.				Lock No. 1, Upper Sill			
	Highest.		Lowest.		Highest.		Lowest.	
1913.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April.....	15	8	14	0	16	6	15	7
May.....	14	10	13	4	17	2	14	5
June.....	13	5	12	1	14	5	12	1
July.....	12	0	11	6	11	9	11	1
August.....	11	5	10	10	11	1	10	4
September.....	11	0	10	6	10	5	10	0
October.....	11	3	10	2	12	3	10	2
November.....	11	7	10	11	12	8	11	8
December.....	11	5	10	8	12	10	11	6
1914.								
January.....	12	5	10	10	12	0	11	4
February.....	11	11	10	8	13	1	11	3
March.....	12	3	9	8	13	0	11	1

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ONTARIO—ST. LAWRENCE CANALS.
SUPERINTENDING ENGINEER'S OFFICE.
ONTARIO-ST. LAWRENCE CANALS.

SIR,—I have the honour to submit my annual report on the maintenance and operation of the Ontario-St. Lawrence canals for the fiscal year ending March 31, 1914.

The Ontario-St. Lawrence canals comprise the Cornwall, Farran's Point, Rapide Plat and Galops canals, the north channel below Prescott on the River St. Lawrence, and the Murray canal between the head of the Bay Quinté and Brighton bay on the north shore of Lake Ontario.

CORNWALL CANAL.

The Cornwall canal was opened for navigation on April 16 and closed December 13, 1913, and was operated throughout the season without any serious delay to navigation.

Accidents.—On October 30 about 10 p.m. the barge *Cornwall*, belonging to the Montreal Transportation Company, loaded with wheat, while being towed down canal, struck the north bank a short distance below Lock No. 21 and swung across canal, where she remained for 14 hours. She was then found to be leaking too badly to proceed through the canal and was beached opposite the upper dam, where she still lies partially under water but well out of the way of navigation.

On November 6 at 10 a.m., steamer *John Lambert*, upbound, struck the upper gates of Lock No. 19, partially unmitred them and broke a suspension rod. At exactly the same time the steamer *Querida*, downbound, struck the upper gates of Lock No. 21 forcing the top of one gate almost at right angles to lock and colliding with the steamer *Windsor*, which was at the time in the lock. One heel casting and one suspension bar, all the binders, and portions of the valve machinery on the gates were broken, and the gates badly twisted. Temporary repairs were made, the gates straightened up, and navigation was resumed at 4 p.m.

Renewals and Repairs.—A portion of the masonry retaining wall, 75 feet in length, below large waste weir at Lock No. 17, was rebuilt. Six hundred and seventy lineal feet of rip-rap on south bank west of Cornwall bridge was rebuilt and faced with concrete.

Six of the old automatic valves in guard weir above Lock No. 20, which had become so badly warped that it was impossible to close them, were removed and replaced with new and stronger valves.

The opening attachment on south gate at guard gates above Lock No. 20 was repaired and strengthened.

Extensive repairs were made to rip-rap between upper dam and Lock No. 21.

The old gates, timber platform, and mitre sills at the head of old Lock No. 20 were removed and a concrete dam, surmounted by a reinforced concrete service bridge, was constructed across the lock in the upper recess.

All of the standing lock gates on the canal received one coat of paint and the operating machinery and valves in both lock gates and supply weirs were thoroughly overhauled and repaired and the machinery painted.

The old wooden intake and bridge at the Stormont Electric Light and Power Company's weir on the south side of canal west of the Cornwall bridge, which were badly decayed, were removed and rebuilt in reinforced concrete by the Company.

The above repairs were attended to while the canal was unwatered during the month of April, 1913.

Ten cast-iron mooring posts, set in concrete bases, were placed on the north bank west of old lock No. 17, three on each side of old lock No. 17, six on the south bank west of Cornwall bridge, seven on south bank east of lock No. 18, six on south bank west of lock No. 18, six on south bank west of the O. & N. Y. Ry. bridge and eight on south bank of lock No. 20, and twelve of the smaller size were placed along the south side of the repairing basin.

The concrete ways on the north side of the repairing basin in the low level were raised three feet to give better facilities for the repairing of boats.

A concrete sidewalk, 500 feet in length, was constructed on the south bank west of Cornwall bridge, leading to the overseer's house.

The coping of south west retaining wall above lock No. 18 for a distance of 350 feet was lifted, damaged stones redressed, and the whole reset to a line six inches back of face of wall and the course below coping chamfered off to meet new line, the coping being also reinforced behind with concrete. The northwest entrance wall at this lock, 30 feet in length, was treated in a similar manner.

A small reinforced concrete bridge was constructed over the intake to the waterworks pumphouse in south bank above lock No. 18. The coping on the south side of lock No. 19 was reinforced behind with concrete and concrete bases of mooring posts lifted and levelled.

The coping of northeast entrance wall at lock No. 20, damaged by steamer *Derbyshire* on May 22, 1913, was lifted, reset, and reinforced behind with concrete.

The coping on south side of lock No. 21 was reinforced behind with concrete and the coping of northwest entrance wall at this lock was lifted and relaid.

The old wooden culvert under highway at Mille Roches carrying drainage to old canal, and which had partially caved in, was removed and rebuilt in concrete.

Extensive repairs were made to the tarred felt roofing on large wood working machine shop.

On April 17 the lower gates in lock No. 17 were taken out and replaced with a pair of square gates. The gates removed were repaired and held for spare gates. On April 18th the south upper gate in lock No. 17 was taken out, a broken step removed and replaced with new one, and gate resteped. The upper gates from old lock No. 20 removed when concrete dam was constructed across this lock, were rebuilt and placed in upper recess of old lock No. 17 above the repairing basin, and the gates removed from old lock No. 17, for which there was no further use, were taken apart, the sound timbers sawed into plank and placed in stock. The lower gates at lock No. 21 were removed on October 3 and replaced with spare gates. The gates removed were at once repaired and placed in the upper recess of this lock in place of the gates damaged by steamer *Querida* on November 6, which were placed in the repairing basin and repaired during the winter. On December 3 the lower gates of lock No. 15 were taken out, placed in repairing basin and are now being repaired. They were replaced with a pair of spare gates.

During the winter new top bars, mullions, bridge planks and foot bridges were framed and made ready for the guard gates above Lock No. 20. The work of removing the old top timbers from these gates, which are badly decayed, and the placing of the new timbers will be completed before the opening of navigation.

The coping of the northeast hollow quoin of Lock No. 15, which was badly broken, was removed after the close of navigation, a new hollow quoin stone dressed and set, and all of the coping stones around the hollow quoin and chain well were lifted, reset, and dressed to proper line.

One thousand one hundred and eighty-five lineal feet of oak waling was placed on face of masonry wall on the north side of canal east of the Cornwall bridge. The

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same length of life chain was also placed along this wall below the waling and 551 feet of life chain was placed on face masonry wall on the south side west of Cornwall bridge.

One section of the floating boom at the head of Lock No. 21, 95 feet long, was placed in the repairing basin after the close of navigation last season and repaired and strengthened during the winter.

Four sections of floating boom at Cornwall bridge, each 72 feet long, were also placed in repairing basin at the same time and rebuilt during the winter.

Both of the swing bridges on the canal received one coat of paint.

The roofs of the watch houses and transformer houses at all of the locks received one coat of paint.

Ordinary repairs to lock gates, fences, banks, and stone protection were promptly attended to, as well as the cleaning of ditches, cutting of weeds, etc.

Gardening.—During the season over 600 native trees and a large number of shrubs were set at various places along the canal. The grounds and flower beds at the various locks and parks along the line of canal were well looked after and presented a very attractive appearance. This portion of the ordinary work has expanded very much during the last few years and new sections of the canal are being improved from year to year. A large number of bedding plants are purchased each season for this work and I beg to strongly recommend the erection of a small greenhouse for the propagation of these plants by our own gardener, who is a most competent man.

The top courses of timber crib forming foundation for light house at the east end of St. Regis dyke about two miles below the Cornwall canal, and which had been seriously damaged by ice, were rebuilt and the stone protection along the face of dyke relaid where necessary.

Improvements.—The work under contract with Mr. G. R. Phillips for the improvement of the lower entrance to Lock No. 15 was completed in a satisfactory manner last season with the exception of some sodding which will be attended to early this season. This work as completed provides a safe and easy approach to this lock from the river and also provides much more harbour room for vessels waiting to pass through the canal.

A contract was entered into with The Kennedy Construction Company in December, 1913, for improving lower entrance to Lock No. 20.

The work consists of the removal of the present old entrance cribwork, 100 feet in length, which is in a very bad state of repair, and the construction in its place, and extending eastwards, of a concrete entrance wall, the total length of which will be 200 feet.

Work on this contract was commenced on December 16, and by January 3 the contractors had removed the top seven feet of the old cribwork, the water in this level of canal being lowered 4 feet to enable the work to be done.

During the winter all of the gravel required for the construction of the concrete wall was delivered, cement shed erected, cement delivered and stored, material for forms and necessary plant placed on ground, and every preparation made to resume operations as soon as water was drawn off canal.

The canal was unwatered on March 23 and the contractors at once resumed operations, removing old cribwork, building cofferdams, and preparing foundation for new concrete wall east of old cribwork.

The work will all be completed before May 15.

Surveys.—Two small survey parties were employed for about four months during the summer of 1913 at the work of obtaining elevations of the ground along the north side of the St. Lawrence river to determine the feasibility of constructing a deep water canal between the deep water below Prescott and a point at or near the mouth of the Ottawa river.

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The area covered comprises a strip of land from two to four miles wide on the north side of the St. Lawrence river between Cardinal and Lancaster.

From these levels a fairly accurate contour map has been prepared on which several locations have been shown and from which profiles of the different locations are being plotted and approximate estimates prepared. The field work between Lancaster and the Ottawa river will be completed during the coming season by one party.

THE WILLIAMSBURG CANALS.

The Williamsburg canals were opened for navigation on April 15 and closed December 16, and were operated throughout the season without any delay to navigation.

Accidents.—On July 12, 1913, the steamer *Toiler*, upbound, while entering lock No. 23 of the Rapide Plat canal, collided with the high level entrance wall at the foot of the lock on the north side displacing and breaking some of the coping stones. The sum of \$100 was deposited by the owners of the steamer to cover the cost of repairs, which will be made before the opening of navigation.

On November 24 the steamer *Cadillac*, downbound, while entering lock No. 28, Galops canal, struck and slightly damaged the south upper gate. Repairs were promptly made and the cost defrayed by the owners of the boat.

Renewals and Repairs.—About 800 lineal feet of stone protection to banks near the head of the Farran's Point canal was rebuilt and large boulders were placed for a considerable length along the river shore of this bank to form a toe for future rip-rapping.

All of the lamp posts on both sides of lock No. 22 at Farran's Point, numbering 16, were moved back about 6 feet to the line of the mooring posts, to be out of the way of vessels' lines, and 7 lamp posts were placed on the new north entrance pier, gas pipe laid, and the whole connected up with the acetylene gas lighting plant.

The gas plant was thoroughly overhauled and all buildings and standing gates on this canal painted.

While the water was lowered in the Rapide Plat canal during the month of April, about 1,400 feet of the stone protection on the south bank opposite the village of Morrisburg was taken down and relaid and the rip-rap stone on the remainder of the south bank, which had rolled down the slope, was thrown back into place in readiness for hand-laying.

A quantity of large boulders was placed along the river shore of the bank, south of lock No. 24 to protect it against wash from the river, which had already made considerable inroads on the earth filling at this point.

The coping of the masonry wall on the south side of the lower entrance to lock No. 23 was lifted, reset, and reinforced behind with concrete, and the wall pointed.

All of the masonry walls in the vicinity of lock No. 23 had joints raked out and repointed above water line.

The high masonry walls on north side of canal in front of the village of Morrisburg were thoroughly repointed.

At lock No. 24 all of the masonry walls above water line were repointed.

About 2,000 lineal feet of the stone protection on south bank of the Galops canal, west of lock No. 25, were relaid.

A large watering place was constructed for Mr. Geo. A. Binion on the north side of the Galops canal, about two miles west of lock No. 25, to replace watering place destroyed during the enlargement of canal.

The two large valves on the north side of lock No. 25, used for filling the 500-foot chamber of this lock, were removed after the close of navigation, sent to our machine shop at Cornwall, and thoroughly repaired, shafts straightened, and new steps pro-

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vided and fitted. They will be replaced in position before the opening of navigation. The removal and replacing of these valves had to be done by diver as no means were provided for the unwatering of the intake when lock was constructed.

Five reinforced concrete bridges were constructed over the Government ditch west of Iroquois, and three corrugated galvanized iron pipe drains were laid in ditch and covered to take the place of old wooden crossings which were badly decayed.

A reinforced concrete floor was placed in village power house at Iroquois, and the south wheel pit pumped out to allow of repairs being made to water wheels. A final settlement of all disputes arising from the construction of this power house by the department was thus effected.

The street along the north side of the canal boundary, west of the weir, in the village of Iroquois, was drained, graded and macadamized.

A portion of the roof of the lockmaster's house at lock No. 25 was reshingled, and a hot air furnace installed in a satisfactory manner.

Two hundred and fifty lineal feet of 9-inch tile drain was laid in ditch across canal property, south of lock No. 25, and ditch filled in.

Forty-four large cast-iron mooring posts, set in heavy concrete bases, were placed at lock No. 25.

Some pointing was done on the masonry walls of locks No. 27 and No. 28, as well as the weir walls and entrance walls to these locks.

The grounds around all the locks are being gradually levelled up and seeded, the flower beds are neatly kept and a large number of small trees and shrubs were planted at various places along the canals.

Ordinary repairs to gates, buildings, bridges, weirs, and banks were attended to, as well as the cleaning of ditches, cutting of grass and weeds, etc.

IMPROVEMENTS—FARRAN'S POINT CANAL—IMPROVING LOWER ENTRANCE.

The work under this contract, which was awarded to The Randolph MacDonald Company, Limited, on the 22nd of May, 1911, was finally completed in a satisfactory manner in August, 1913.

The work embraced the removal of the old cribwork pier on the north side of the lower entrance to this canal, down to the low water line and replacing it with concrete wall, a length of 750 feet, and the extension of the cribwork pier with concrete walls on top for a further distance of 1,140 feet, besides the necessary dredging to provide proper foundations for cribs.

The work as completed has vastly improved the entrance to this canal and vessels upbound have now no trouble when approaching the lock, if they are properly handled, in spite of the treacherous eddy at this point.

RAPIDE PLAT CANAL—IMPROVING LOWER ENTRANCE TO LOCK NO. 24.

This work, which is under contract to Messrs. Roger Miller and Sons, comprises the widening and straightening of the canal immediately below the lock, and the construction of a timber and concrete approach wall on the north side of the lower entrance to lock. Of the work under this contract there now remains to be done only a small quantity of dredging, which will be completed early this season.

GALOPS CANAL—LOCK NO. 28.

The position of this lock, which surmounts the Galops Rapids, is open to the river at each end and unprovided with guard gates which can be used when a down-bound vessel is entering the lock, made it imperative that some means be provided for closing the lock in the event of an accident to gates.

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Three steel lattice girders designed to be placed, in case of emergency, in the stop log checks at head of lock, furnishing support for a timber bulkhead, are now lying on south side of lock.

A contract with the Dickson Bridge Company was entered into on December 31, 1913, for the construction and erection of a steel bridge to be swung across the lock for the purpose of lowering steel girders into position.

This bridge will be erected in position before May 31.

Surveys.—The survey for the extension of the upper entrance of the Rapide Plat canal to make it possible for downbound vessels, drawing 14 feet, to use this canal during periods of low water, was completed last season. The whole of the location of the proposed new entrance has been sounded and cross-sectioned. As the canal is at present it is not safe for large boats to enter it from above. The Rapide Plat opposite this canal is shallow, and in season of low water, boats have to lighter to 13 feet in order to pass through this rapid.

MURRAY CANAL.

The Murray canal was opened for navigation on April 10 and closed on December 10, and was operated throughout the season without serious delay to navigation.

Accidents.—On May 10 the three-masted schooner *Major N. H. Ferry*, west bound, collided with one of the piers of the Central Ontario Railway bridge, and sunk in canal a short distance east of the Smithfield road bridge. No damage was done to bridge and no delay was caused to navigation.

A good deal of trouble was experienced in the raising of this vessel and it was not till June 10 that she was finally removed from the canal. It was necessary to close the canal to navigation from 3 p.m. May 30 to 10 a.m. May 31 to allow wrecking plant to work to advantage. After removing her from canal she was abandoned by the owners and sunk in the Bay Quinté about one mile east of the canal and close to the south shore.

On July 9 the steamer *North King*, west bound, struck the east rest pier of the Trenton road bridge displacing several of the coping stones.

On July 22 the same steamer, east bound, struck the west rest pier of the Smithfield road bridge, displacing eleven coping stones.

In both cases repairs were promptly made by the canal staff and the cost of same paid by the owners of the vessel.

On October 6 the barge *Sophia Minch* in tow of the steam barge *John Rolf*, struck the east pier of the Smithfield road bridge, displacing two coping stones. The damage was promptly repaired and cost defrayed by the owners of the barge.

Renewals and repairs.—All of the buildings on this canal received one coat of paint. Two rooms in foreman's house were repapered and inside woodwork painted. Three rooms in bridgeman's house at Smithfield road bridge were repapered. The inside woodwork in bridgeman's house at C. O. Railway bridge was painted and cistern cleaned out and recovered.

About 10 miles of wire fencing along right-of-way was thoroughly repaired.

About 6,500 lineal feet of telephone line were erected along the north side of the canal between C. O. Railway bridge and the Smithfield road bridge and the canal telephone moved from the watch-house at the railway bridge and permanently installed in the canal foreman's house.

All necessary repairs were made to rip-rap, banks, and roads, all catch water and offtake ditches were kept clean and in good repair, grass and weeds kept cut, and minor repairs made to bridges and houses.

The sand spoil dump alongside of the bridgeman's house at the railway bridge was levelled down, graded around the house, covered with good soil and seeded.

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Improvements.—The work under contract with the MacDonald Contracting Co., Limited, for the removal of certain high areas in the bottom of this canal, was completed in a satisfactory manner in June, 1914.

The bottom of canal is now clear to its original depth, eleven feet at low water stage in Lake Ontario. The final estimate for this work has been paid.

Surveys.—The survey to ascertain the extent and cost of the work necessary to provide a navigable depth in this canal of 14 feet at low water stage in Lake Ontario has been completed. An approximate estimate of the cost has been prepared and sent to the department.

The large increase of traffic through this canal during recent years, and the increasing number of vessels of the larger class using this waterway, would seem to warrant the deepening of this canal to permit vessels using it to load St. Lawrence canals draught, and vessel owners are urgent in their demands that this be done.

Attached are statements of fines and damages collected during the year, and highest and lowest water in river at each of the canals.

I have the honour to be, sir,
Your obedient servant,

C. D. SARGENT,
Superintending Engineer.

W. A. BOWDEN, Esq., C.E.,
Chief Engineer,
Department of Railways and Canals,
Ottawa, Ontario.

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STATEMENT OF Fines and Damages in Connection with "Ontario-St. Lawrence Canals," for the year ending March 31, 1914.
CORNWALL CANAL

Lock.	Date.	Name of Vessel.	Damage.	Fine.	Name of Owner.	Remarks.
			\$ cts.	\$ cts.		
17	May 7	Steamer Calgary	40 00		Richelieu & Ontario Nav. Co.	Paid May 15.
17	" 14	Steamer Carleton		20 00	F. E. Hall & Co.	" May 19.
21	" 16	Steamer Mapleton		10 00	Merchants Mutual	" May 24.
17	" 20	Tug "Lyon C"		10 00	L. Cohen & Sons	" April 6, 1914.
G. Gates.	" 22	Steamer Derbyshire	61 69		Brookville Transportation Co.	" June 16.
21	July 11	Steamer Harry E. Packer		25 00	Rogers Transportation Co.	" July 16.
G. Gates.	May 28	Steamer R. R. Rhodes	35 85		F. E. Hall & Co.	" June 25.
21	Nov. 6	Steamer Querida	289 63		Donaldson SS. Co.	" Nov. 6.
19	" 6	Steamer John Lambert	21 03		Great Lakes & St. L. Trans. Co.	" Jan. 15, 1914.

WILLIAMSBURG CANALS.

22	June 3	Steamer Compton	64 35	10 00	F. E. Hall & Co.	Paid June 7.
23	July 12	Steamer Toiler			Richelieu & Ontario Nav. Co.	" July 26.
25	Aug. 11	Steamer Froquois	17 35	3 00	St. Lawrence & C. Nav. Co.	" Aug. 23.
28	Nov. 24	Steamer Cadillac		15 00	Merchants Mutual	" Apr. 23, 1914. (Damages). Paid Nov. 27 (Fine)

MURRAY CANAL.

Smithfield Bridge.	July 9	Steamer North King	15 82		Richelieu & Ontario Nav. Co.	Paid Aug. 5.
"	" 22	Steamer North King	22 19		Richelieu & Ontario Nav. Co.	" Aug. 19.
"	Oct. 26	Barge Sophia Minch	14 38		Point Anne Quarries	" Nov. 4.

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RECORD of Highest and Lowest Levels of water on the "Ontario-St. Lawrence Canada," for the year ending March 31, 1914.

Months.	CORNWALL CANAL.			FARRAN'S POINT CANAL.			RAPIDE PLAT CANAL.			GALOPS CANAL.			LIFT LOCK.		MURRAY CANAL.	
	Lock 15.		Lock 21.	Lower Lock 22.		Upper Lock 22.	Lock 23.		Lock 24.	Lock 25.		Lock 27.	Lock 28.			
	High.	Low.		High.	Low.		High.	Low.		High.	Low.		High.	Low.		
1913.			Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
	17-9	16-5	17-9	16-8	19-8	19-1	20-0	19-5	20-2	18-6	19-2	17-5	23-8	21-0	18-0	17-2
	April.....	16-8	16-5	17-5	16-9	20-0	19-2	19-6	19-8	19-2	19-3	18-0	23-0	22-2	18-0	17-4
	May.....	16-8	16-0	17-7	17-2	20-5	19-4	20-7	19-9	19-3	19-5	18-8	23-1	22-1	18-2	17-6
	June.....	16-7	16-3	17-7	17-0	20-1	19-4	20-5	19-8	18-9	19-9	18-5	23-0	19-8	17-5	19-8
	July.....	16-4	16-0	17-3	16-3	19-7	18-3	19-9	18-7	19-3	18-9	17-6	22-3	20-3	17-6	16-4
	August.....	16-1	15-4	16-7	15-9	18-8	18-0	19-2	18-4	18-7	17-2	18-2	21-5	20-0	17-2	16-0
	September.....	15-9	15-2	15-6	14-4	18-9	17-2	18-8	17-4	18-4	16-7	17-9	21-0	19-2	16-6	15-5
	October.....	15-8	15-1	15-5	14-5	18-9	17-3	19-4	17-7	18-3	17-1	17-8	21-1	19-3	17-3	15-6
	November.....	15-6	14-8	16-5	14-8	18-0	17-1	18-5	17-8	18-0	15-7	17-8	20-8	19-3	16-3	15-0
	December.....															
1914.																
	January.....	28-2	15-0	16-7	14-6	18-7	17-2	17-9	16-5	16-8	15-5	19-8	18-0	16-0	15-0	13-0
	February.....	27-9	21-6	18-0	14-9	20-5	17-4	20-7	18-0	18-4	15-6	16-5	19-5	15-7	13-9	15-0
	March.....	25-1	20-2	16-1	14-9	20-0	17-8	22-0	18-0	17-1	15-3	16-5	20-0	17-5	13-7	12-8

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ONTARIO-ST. LAWRENCE CANALS,
SUPERINTENDING ENGINEER'S OFFICE,
CORNWALL, April 1, 1914.

SIR,—I have the honour to submit my annual report on the St. Peter's Canal for the fiscal year ending March 31, 1914.

The canal was opened for navigation April 7, 1913, and closed January 9, 1914, and was operated throughout the season without interruption to navigation.

The total number of vessels of all classes that passed through this canal was 1,850, of which 1,333 were registered and 517 unregistered.

The unregistered vessels were chiefly fishing boats and other small craft measuring from 2 to 10 tons burthen. Following is a descriptive statement of these unregistered vessels:

DESCRIPTION.			TOTAL.		CARGOES—TONS.			
Sail.	Motor.	Aux.	Tonnage.	Pass.	Farm Produce.	Coal and Wood.	Fish and Bait.	Misc.
350	75	92	2239	205	4	47	189	74

Owing to want of proper repairs from time to time in the past the lock gates and their equipment are in such a condition that only by the strictest supervision and making constant minor repairs was it possible to keep the lock in operation throughout the season. The gates are becoming more difficult to operate every day owing to the condition of their hangings, toe rollers and segment plates.

The swing bridge over the canal near the lake entrance is also in very bad shape and will need to be replaced with a new one in the near future.

Necessary repairs were made from time to time to the lock gates and bridge. Wire netting was placed on each side of the swing bridge and all general repairs were attended to during the season.

A new freight shed was erected at the lake entrance to the canal in place of the old shed at the Atlantic entrance, which had to be removed on account of the works of improvement now being carried on.

An accident occurred on September 27th, between the hours of 7 and 8 in the evening, by which an elderly woman lost her life. She attempted to cross the swing bridge while it was being opened in spite of the fact that she was warned not to do so by the bridge men.

The coroner's jury returned a verdict of accidental death, attributing no blame to anyone.

IMPROVEMENTS.

The works of improvement, as designed, consist of the construction of a new lock and entrance at the Atlantic end of the canal.

This work, which is under contract with Mr. W. H. Weller, of St. Catharines, Ont., was commenced on May 4, 1912, and was carried on without interruption till January 9, 1913, when it was closed down for the season. Work was resumed on

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April 15, 1913, and continued throughout the season up to February 7, 1914, when it had to be closed down on account of the extreme cold weather, the difficulty of securing a steady supply of efficient labour, and the need of extensive repairs to the contractor's plant.

The principal item of work accomplished at present on this contract, is earth excavation, and the extremely hard nature of this material (making necessary the constant use of dynamite to loosen the earth in front of the steam shovel) has greatly retarded the work, and progress up to the present time has been very disappointing.

The total amount of material excavated to date is 187,000 cubic yards, of which 110,000 cubic yards were excavated during the season of 1913.

As a result of new borings taken in February, 1914, to more accurately determine the surface of rock, it was found that there was very much less rock to be excavated than was originally estimated. As a result of these borings the fact was revealed that by far the greater part of the new lock as designed would not rest on solid rock.

In view of this fact I have recommended to the department that a new location for this lock be adopted and certain changes made in the location of the new entrance.

In order to carry out the work on the lines of the proposed change in location, it will be necessary to close the present canal to navigation for one year, which is perhaps the most serious matter to be considered in this connection, but the change proposed will materially improve the Atlantic entrance to the canal, from an operating point of view.

The whole matter is now under consideration and the work under contract is being held in abeyance by the contractor, awaiting the decision of the department.

I have the honour to be, sir,
Your obedient servant,

C. D. SARGENT.
Superintendent Engineer, Ontario-St. Lawrence Canals.

W. A. Bowden, Esq., C.E., Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

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RIDEAU CANAL.

SUPERINTENDING ENGINEER'S OFFICE. *

OTTAWA, April 1, 1914.

SIR,—I have the honour to submit herewith, my report on the Rideau canal for the fiscal year ending March 31, 1914.

Navigation opened at Ottawa, on May 1, 1913.

Navigation opened at Kingston Mills, on May 1, 1913.

Navigation closed at Ottawa, on November 30, 1913.

Navigation closed at Kingston Mills, on November 24, 1913.

Navigation was uninterrupted throughout the entire season until the middle of November, when the water in Rideau lake had fallen about two inches below navigation height; but as the season closed in that vicinity about the 24th, inconvenience was only experienced for about ten days on account of low water.

The coping of the mitre sill of the middle lock at Hartwells locks burst up from water pressure in July; but navigation was only delayed for one Sunday.

The freshet of 1913, which was in progress when I wrote my last annual report, was passed through the various levels without damage, in spite of the fact that it was of longer duration and greater volume than for many years past—in fact it was remarkable where so much water came from, as the snowfall was very much below normal. I am of the opinion that the excessive rains of 1912-1913, which caused the levels to continue high all winter, were in reality the chief cause of the long continued period of high water, as they were all full when the freshet occurred.

The present freshet commenced on the 27th March ultimo, and so far, is the lightest I have ever known. It is not of course over by any means, nor in fact can it be said to have reached its height; but a great quantity of ice has already gone, and as the ice (which is of unusual thickness this year) is really what causes damage, I do not anticipate any injury to the structures or weirs, even if the water continues to rise.

The lockages at Ottawa were slightly fewer than last year, but from Hartwells to Smith's Falls there was a small increase in the number; whilst at Poonamalie there was a very large increase, the total for the season at that station being 5,602, an increase of 1,370 over the number of lockages in 1912. This is of course due to the ever increasing number of motor boats going into Rideau lake. From the Narrows lock to Kingston, the lockages last year show a small decrease in number from those of 1912.

The principal works and repairs carried out along the line of the canal during the past fiscal year are as follows:—

OTTAWA LOCK STATION (8 Locks and 1 Basin).

Two new pairs of lock gates were framed and hung in locks Nos. 3 and 8. A new mitre sill was built in lock No. 4, and the sill of lock No. 2 was repaired. A new concrete coping is being laid on the sill of lock No. 3.

A fire occurred in the oil room in the storehouse, supposed to have been caused by spontaneous combustion. The shed was partially destroyed, but has been rebuilt and a new concrete floor laid thereon. The lock house was repaired, and portions of the interior were painted; and a new varandah built at the west side.

Small repairs such as grouting and pointing, were made to the masonry of the locks; and some new water boards put under the lock gates. A considerable portion of

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the roadway round the basin was macadamized; and portions of the wharves were taken down and rebuilt—which latter work is still in progress. A new offtake drain and grating were placed at the wharf at the foot of Canal street. The electric light system round the locks and basin, from the Ottawa river to Laurier bridge was rebuilt—the arc lamps being discarded and replaced with tungsten lamps in clusters of four to each pole, all enclosed in clear glass globes with canopy on top. This system is a great improvement in every way, as we obtain a better light, and the cost of patrolling and carboning has been abolished, our own men looking after renewals, etc. The basin was cleaned out and deepened by our new dredge *Tay*, a much needed improvement, the work serving the double purpose of deepening the basin, and also affording a test under our own supervision of the working of the new dredge before we took her over from the contractor who built her.

OTTAWA EAST BRIDGE.

Small repairs were made to the roadway, and also to the pivot and rest piers. The corporation of Ottawa, with the consent of the hon. the Minister, built a sidewalk on the upstream side of the bridge last spring, suspended on brackets.

CONCESSION STREET BRIDGE.

Two new spring locks were placed at either end of the swing bridge, on account of the old latches having proved defective in jarring open, thus allowing the swing to partially open. Small portions of the bank between this bridge and Bank street were ripped, and some gravel was placed on the road.

HARTWELLS LOCK STATION (2 Locks).

A new lay-by pier 125 feet long was built on the west side of the canal at the head of the locks. Some more dry stone walling was built along the east bank of the canal; and about 2,000 feet of the old dry stone wall was cemented in situ by Concrete Constructions Limited, with what is known as the "Cement Gun." This process consists of projecting dry sand and cement through a line of hose under air pressure, to a nozzle where it is met by a jet of water which hydrates the mixture and blows it into the interstices of the stone under a pressure of about 40 to 50 pounds per square inch. The permanent result of this method of grouting of course remains to be seen, but I think it should be fairly satisfactory; the chief fault, in my opinion, being the bespattered appearance of the walls when finished. It can be readily understood that projecting rich grout in this manner into a dry stone wall will solidify it; but it is almost impossible to do such work without covering up the face of the wall with the cement when projected with such force. Thus the face stones are splashed and partly covered up with cement, which may or may not flake off afterwards.

Otherwise the system would appear to be fairly satisfactory, particularly in open stonework which cannot be readily taken down and rebuilt.

Small repairs were made to the lock house and outbuildings and to the station generally.

The canal bank road requires to be thoroughly overhauled and macadamized, on account of the exceedingly heavy traffic over it; for which traffic, by the way, it was never intended or constructed. Portions will be put in shape this coming season.

HOGSBACK LOCK STATION (2 Locks, 1 Swing bridge).

Three of the large ice breaker cribs above the waste wiers were taken down to water level and rebuilt and filled with stone. Portion of the back of the dam was repaired with stone, and a large quantity of clay was placed on the face of the

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structure. More dry stone walling was built along the east side of the cut below the locks; and the roadway received some repairs. The swing bridge across the upper lock was cleaned by sand blast and painted by Concrete Constructions Limited.

The ice between the boom and the waste weirs was all blasted out before the freshet commenced; and the boom itself was provided with new $\frac{3}{4}$ -inch chains between each length.

BLACK RAPIDS LOCK STATION (1 Lock).

The old stone lock house which was in a dangerous state was taken down, and a frame house built upon the old foundation walls. The old storehouse was also taken down and rebuilt on concrete foundations. The lay-by piers at the foot of the lock were repaired, and sundry small repairs made to the station generally.

LONG ISLAND LOCK STATION (3 Locks, 1 Bridge).

A new storehouse on concrete foundations was built here last summer. During the winter very extensive repairs were made to the upper lock; which was practically all taken down and rebuilt. The cause for these repairs was the fact that both chamber walls had gradually shoved forward from the top of the fourth course from the bottom, to such an extent that each side of the chamber of the lock, for its whole length, overhung the bottom courses by fully 14 inches. This was caused by a defective method of construction when the lock was built, as, in order to get rock foundation, the builders had to go down about six feet below the required level of the bottom of the lock; and instead of commencing with a battered face to the walls from the bottom, the lower six feet of the chamber wall was built with plumb face, and the batter commenced from that point and continued upwards for a further height of over 19 feet. There being no support outwards for the lower courses as there was no filling put in, the wall simply shoved forward imperceptibly year by year at the angle formed where the batter joined the plumb face, with the above result.

Portions of the timber apron below the bulkhead were repaired; and some new stoplogs were framed for the bulkhead at Manotick.

MANOTICK BRIDGE.

Some new pin beams were put under the swing span, and some extra joists under the fixed spans.

Materials for a small boathouse for the bridgekeeper were supplied; he erected the same himself.

WELLINGTON BRIDGE.

No repairs made here last year.

BECKETT'S LANDING BRIDGE.

No repairs made here last year.

BURRITT'S RAPIDS LOCK STATION (1 lock, 1 bridge).

The old timber waste weir was taken down and rebuilt. A new set of stoplogs was furnished for the same, as well as new flashboards for the flat dam. Portions of the masonry of the stone waste weir were repaired. A long protection crib 450 feet in length was built below the waste weir to stop the erosion that has been going on for years to the bank of the island; and another crib 160 feet long was built at the head of the island for the same purpose. These cribs were filled with stone furnished by

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contract with Mr. C. White for the latter, and by contract with Mr. Z. Percival for the former.

The swing bridge in the village was cleaned by sand blast and painted by Concrete Constructions, Limited, and sundry small repairs were made to the station in general.

NICHOLSON'S LOCK STATION (2 locks, 1 bridge).

A small frame house for a lockman's residence, and a stable for the lock' house, were purchased from the owners, who were leaving our service, and who had erected them for their own use on canal land. Sundry small repairs were made to the station in general.

CLOWE'S LOCK STATION (1 lock).

Sundry small repairs were made to the lock house. A new set of stoplogs was framed for the waste weir, as well as a pair of lifting crabs for the same.

Heavy repairs were made to the retaining dam, which is one of the old structures built by stone laid perpendicularly and arched upstream. The centre of the dam after 80 years use had been pushed downstream to a considerable extent, thus destroying the keywork. About 160 feet of the dam was taken down and relaid in cement to its original radius. Sundry other small repairs were made to the station in general.

MERRICKVILLE LOCK STATION (3 Locks, 2 Basins, 2 Bridges).

Two new pairs of lock gates were framed and hung, and four new sluice frames with new flanges supplied.

Two new timber and concrete mitre sills were laid in the upper and centre locks. A new set of stoplogs was framed for the bulkhead at the head of the upper cut, as well as a new set of flashboards framed for the flat dam. Sundry other small repairs were made to the station in general.

A contract has been let to Mr. John O'Toole, of Ottawa, for the construction of a new concrete retaining dam at this station. This dam is to be built from the head of the upper lock to the north bank of the river; and in addition to its replacing the present old dam, it will catch all the present leakage through the north side of the upper cut, in the pond it will form when finished. The cement for this dam, as well as the stoplogs and stoplog lifters, are being provided by the department, and do not form any portion of the contract.

KILMARNOCK LOCK STATION (1 Lock, 1 Bridge).

Extensive repairs were made to the back dam last winter, the work being done by contract with Mr. A. E. Newsome. New timbers have been placed on the dam for 455 feet of its length, and 600 cubic yards of stone were also supplied and placed in position. Both ends of this dam were carried further up to the higher ground, and I think that the water will now be prevented from getting round the ends of it as frequently done. The dam is now in far better condition than it has ever been before. Sundry other small repairs were made to the station generally.

EDMOND'S LOCK STATION (1 Lock).

The stone dam received considerable repairs, and all the wooden blocks which had temporarily filled the places of stones carried out by ice, were replaced by stones laid in cement. The top of the dam was also concreted to carry flashboards without scribing them to fit the irregularities of the old stones. Some clay also was placed on the back of the dam, and sundry small repairs were made to the station in general.

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OLD SLYS LOCK STATION (2 Locks, 1 Bridge).

Small repairs were made to the lower sill of the lower lock, and to the sluices of the lower gates. Two new swing bars were framed for the lock gates. Some clay filling was placed between the upper lock and the lock house, and the sundry small repairs were made to the station generally.

SMITH'S FALLS COMBINED LOCK STATION (3 Locks, 1 Basin, 2 Bridges).

Small repairs were made to the porch of the lock house. A new sidewalk on steel brackets was built on the two spans of the bridge below the basin, the work being done by the Dominion Bridge Company, Montreal. A new bulkhead was framed and put in on the west side of the basin dam. Small repairs were made to the swing bridge, the lock masonry, and to the station generally.

SMITH'S FALLS DETACHED LOCK STATION (1 Lock, 2 Bridges).

The concrete wall on the south side of the cut from the lock to the basin has been completed by the Contractor, Mr. James Bogue, of Peterborough. Some more filling was placed on the south side of the basin. A small addition was built to the storehouse, and sundry repairs were made to the lock house. The island on which the lock house stands was underbrushed and cleaned up in order to make a good roadway to the wharf at the head of the lock. The Bascule bridge built at the head of the lock by the Canadian Northern Railway Company, has now been supplied with an electric motor; so that it is to be hoped no more of the delays occasioned last season, by the slow hand operation of this structure, will be experienced.

POONAMALIE LOCK STATION (1 Lock).

Two lay-by piers, each 150 feet long, were built, one above and the other below the lock. Four new stoplogs were framed for the waste weir. A dry stone wall about 60 feet long was built above the upper wharf; and the cement-laid wall on the north side of the upper cut, was extended for 380 feet, which extension has completed the work. Small repairs were made to the lock house and other government buildings, and to the station generally.

BEVERIDGES LOCK STATION (2 Locks, 1 Bridge).

The swing bridge above the lower lock was cleaned by sand blast and painted by Concrete Constructions Limited. Some clay was placed on the retaining dam, and sundry small repairs made to the station in general.

PERTH BRANCH (1 Basin, 4 Bridges).

Considerable repairing was done to the wharf at the north end of the basin, portions of which have been rebuilt. The work will be continued along the west side of the basin this year. The sidewalk on Drummond Street bridge is being renewed. When re-erected it will be 18 inches wider than before in order to conform to the line of the sidewalks on each side of the bridge. The water service on the canal bank has been extended as far as Beckwith Street bridge, and this has enabled us to keep the lawns and slopes in excellent condition. Sundry repairs were made to the banks and tow path roads generally.

OLIVERS FERRY BRIDGE.

The approaches at each end of the bridge were rebuilt and graded up and the outside slopes rip-rapped. New joists have been delivered, and will be put in to carry a new floor next winter.

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THE NARROWS LOCK STATION (1 Lock, 1 Bridge).

The lock labourers' house was re-shingled and clapboarded, and the lock house was painted. Some gravel was placed on the dam, and sundry small repairs were made to the station in general.

NEWBORO LOCK STATION (1 Lock, 1 Bridge).

The dry stone wings on each side of both abutments of the high level bridge were filled with cement by means of the "Cement Gun" by Concrete Constructions Limited. These wing walls are very high and last spring one of them fell outwards into the canal. The work done by the company, (although it must be confessed that its appearance could be improved upon), has converted these loose stone wings into concrete monoliths, and has removed all possible danger of another slide.

The lock house was painted, and sundry small repairs were made to the station in general.

CHAFFEY'S LOCK STATION (1 Lock).

Small repairs were made to the lock house and also to the storehouse. The grounds on the west side of the lock were partly underbrushed and cleaned up, and this work will be continued this year. The Canadian Northern Railway Company's line crosses the canal with a fine high level bridge above the lock, and a station has been built near by; so that I anticipate a great influx of tourists to this beautiful lake section of the canal in the near future.

DAVIS'S LOCK STATION (1 Lock).

Small repairs were made to the bridge crossing the waste weir and to the station generally.

JONES' FALLS LOCK STATION (4 Locks, 1 Basin, 2 Bridges).

Some new wire fencing was erected round the combined locks. The stonework of the lock house was pointed, and a new cement floor was laid in the cellar. Some clay and gravel were placed on the dam and the storehouse was re-shingled. Sundry repairs were made to the station in general.

BRASS'S POINT BRIDGE.

Sundry small repairs were made to the handrailing and flooring.

UPPER BREWERS LOCK STATION (2 Locks, 1 Bridge, 1 Basin).

Small repairs were made to the dam, and to the station generally.

LOWER BREWERS LOCK STATION (1 Lock, 1 Bridge).

The wharf above the lock was taken down to low water mark and rebuilt. Small repairs were made to the approaches on each side of the swing bridge, and to the lock house, and to the station in general.

KINGSTON MILLS LOCK STATION (4 Locks, 1 Basin, 2 Bridges).

One new pair of lock gates was framed and hung. The swing bridge across the upper lock, and the fixed bridge below the west weir were cleaned by sand blast and painted by the Concrete Constructions Limited. Two new sluice frames were placed in position. The storehouse was re-shingled, and a new galvanized iron roof laid on

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the addition to the block house. A large quantity of stone was placed on the embankments and small repairs were made to the lock house, and to the station generally. At present time a new concrete lining wall is being built on the south side of the basin, which work will be finished this month before navigation opens. Mr. J. M. Campbell, the lessee of the water power below the waste weir, is building his plant, and when finished the appearance of the station will be materially improved.

The curve stone retaining dam is in need of pointing and repairing, and this will be the subject of a separate report later on.

BOB'S LAKE RESERVOIR DAM.

No repairs were made to this dam last year.

WOLF LAKE RESERVOIR DAM.

Small repairs were made to the sluiceway and bridge crossing the same. As I reported to you, the discharge of water from Wolf lake is very much obstructed by the existence of a private mill dam belonging to a Mr. Derbyshire, about half a mile below our dam; and which dam, being built to the same height as that to which we are entitled to raise the water in Wolf lake, renders our dam useless for the purpose for which it was built, by backing up the water on to it. I have already suggested a remedy by the purchase from Mr. Derbyshire of his dam, for a small sum, and I trust my suggestion will meet with your approval.

GENERAL.

The usual spring repairs, such as pointing and grouting the lock masonry, painting of lock gates, bridges, fences, etc., etc., were executed by the lock labourers after they came on duty for the season last April.

The heavy dimension stone for lock repairs was quarried by our men last summer in Westport quarry, where it was also cut and dressed to dimension. It was freighted to its various points of destination by our own tugs and scows.

The materials required for the season, such as cement, paint, oil, etc., etc., were purchased for us by the purchasing agent of the department; and we delivered them along the line of the canal with our own tugs and scows.

DREDGING PLANT.

The dredge *Rideau* was employed all last season on the Perth branch of the canal, cleaning out and widening the clay and also the rock cuttings (the latter being blasted out ahead of her). She has another full season's work ahead of her on the Perth branch.

She wintered in the Perth basin, and is now being repaired and fitted out for the season's work.

The tug *Loretta* was employed last season as usual in buoing out the channel, towing scows, delivering timber, stone, cement, and other stores, and also on inspection work. She wintered in the Ottawa basin, and is now being fitted out and repaired for the ensuing season's work.

The tug *Agnes* was employed last season in towing scows and delivering materials along the canal, and also in attendance on the new dredge *Tay*. She wintered in the Ottawa basin, and is now fitting out for the season.

The new dredge *Tay* was delivered by the contractor in October last, and was at once put to work in cleaning out and deepening the canal basin at Ottawa. She has given us the greatest satisfaction both as to her equipment and the satisfactory manner in which she works, and reflects great credit on her builders, the W. H. Kelly Lumber

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Company, of Buckingham. Our dredging plant now consists of two tugs, two dredges, two side dumping and five flat scows, and one gasoline launch, all of which are in fine order.

The following is a statement of the highest and lowest water on the lower mitre sills of locks Nos. 1 and 47 at Ottawa and Kingston Mills lock stations, respectively:

Ottawa, Lock No. 1.				Kingston Mills, Lock No. 47.			
Highest.		Lowest.		Highest.		Lowest.	
ft. in.		ft. in.		ft. in.		ft. in.	
April 2.....	20 3	April 15-19.....	17 2	April 29-30.....	9 10	April 1-4.....	9 2
May 9.....	20 9	May 31.....	15 9	May 28-31.....	10 3	May 1-4.....	9 10
June 1.....	15 5	June 30.....	10 6	June 1-30.....	10 3	June 1-31.....	10 3
July 1.....	10 1	July 31.....	8 5	July 1-3.....	10 2	July 24-30.....	9 10
Aug. 1.....	8 4	Aug. 24.....	6 10	Aug. 1.....	9 10	Aug. 25-30.....	9 3
Sept. 4-5.....	7 3	Sept. 14.....	6 6	Sept. 1.....	9 5	Sept. 29-30.....	8 10
Oct. 28-31.....	10 2	Oct. 12.....	6 6	Oct. 1-3.....	8 10	Oct. 29-31.....	8 6
Nov. 30.....	12 3	Nov. 7-8.....	9 8	Nov. 1-3.....	8 6	Nov. 9-20.....	8 4
Dec. 8.....	12 4	Dec. 29.....	10 9	Dec. 1.....	8 4	Dec. 31.....	8 0
Jan. 1.....	11 1	Jan. 29.....	9 2	Jan. 3-31.....	8 1	Jan. 1-22.....	8 0
Feb. 3.....	9 4	Feb. 25-26.....	9 0	Feb. 5-15.....	8 2	Feb. 18-28.....	8 0
March 31.....	12 2	March 13.....	8 6	March 31.....	8 1	March 12-15.....	7 8

I have the honour to be, sir,

Your obedient servant,

A. T. PHILLIPS, M. Can. Soc. C.E.,
Superintending Engineer

W. A. BOWDEN, Esq., C.E.,
 Chief Engineer,
 Department of Railways and Canals,
 Ottawa, Ont.

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TRENT CANAL.

SUPERINTENDING ENGINEER'S OFFICE,

PETERBOROUGH, May 30, 1914.

W. A. BOWDEN, Esq.,
Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

DEAR SIR,—I have the honour to submit my annual report for the fiscal year ended the 31st March, 1914, covering the work of construction chargeable to "capital," Trent canal.

ONTARIO—RICE LAKE DIVISION.

This section extends from Trenton on Lake Ontario to Rice lake, a distance of 50½ miles, a detailed description of which was given in my annual report for 1910.

For construction purposes the division has been divided into 7 sections or contracts; the estimated value of which as revised to date is about \$5,100,000, on which there has been expended for work done and materials delivered up to the 31st March, 1914, the sum of \$4,206,171.52, or about 83 per cent of the estimated value of the seven contracts at their respective contract rates.

There are on the division 18 locks, 14 dams and 18 bridges. All the locks are built ready for the reception of their gates. Their upper and lower entrance piers are also finished with the exception of the lower piers of lock 15, which will be finished this summer. All the dams were built except Nos. 4, 9 and 10 which are from 25 to 90 per cent built and will be finished this year. Fifteen bridges are finished and in commission. The substructures of two others are finished, but the construction of the bridge for the Grand Trunk railway main line at Campbellford has not been begun.

Section No. 1.—This section extends from Trenton to Glen Miller, a distance of about 4½ miles, on which stretch of the river there are 3 locks, 3 dams and 2 bridges. The contractors for the work, Messrs. Larkin & Sangster, completed the whole of the works embraced in their contract in December, 1913.

During the past summer, 1,350 feet of concrete wall along the river side of the channel in front of Meyer's island, Trenton, was built for the protection of the navigation channel at this point during the spring freshets. The wall was fully and satisfactorily completed last autumn.

The final estimate for Messrs. Larkin & Sangster's contract is now being prepared and will be completed at an early date.

The Sydney Electric Power Company's plant at dam No. 2 has been in continuous operation throughout the year. A short description of this plant was given in my annual report for 1912.

The substructure of the Gilmour Siding Bridge is finished up to water level, but cannot be completed until the design of the superstructure has been definitely decided upon.

The main line of the Campbellford Lake Ontario and Western Ontario Railway (Canadian Pacific Railway) crosses the river about 4,700 feet below lock No. 1 by a viaduct 1,500 feet long and 50 feet high, built under the terms of lease 19946, dated the 14th March, 1913. It is designed for a single track and will provide a clear head

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room of 39 feet between the lowest steel and high water. The navigation channel span is 100 feet wide in the clear. The substructure for the bridge was finished in March, 1913 and the superstructure was fully erected in September, 1913, when construction trains immediately began crossing the bridge. The whole of the work was carried out by the railway company at their own cost.

Miller Bros., Glen Miller, in August, 1912, began the construction of a concrete dam of the canal type at Glen Miller to replace their old wooden structure at this point. The west half of the dam was finished in December, 1912, and the whole of the structure was fully completed in July, 1913. The work was carried out by the Ambersen Hydraulic Construction Company, of Montreal, under contract with the Miller Bros.

Section No. 2.—This section extends from Glen Miller to Frankford, a distance of about $4\frac{1}{2}$ miles, on which stretch of the river there are 3 locks, 3 dams and 1 bridge. A contract for the work was entered into with Messrs. Dennou & Rogers on May 20, 1908. The total value of the work done and materials delivered up to March 31, 1914, amounted to \$566,669.51, or about 80 per cent of the value of the contract.

The three locks on the section are completely finished, also the work in connection with the three dams except the platform across the top of the piers of dam No. 4, which will be finished early this summer.

All the excavations with the exception of a little cleaning up has been finished in the upper and lower entrances of locks 4 and 5 and also in the lower entrance to lock 6. There is yet about 5,000 yards of excavation to be taken out of the canal prism above lock 6 and some concrete lining has yet to be laid on the bottom and slopes of the upper end of this short canal, all of which work should be finished early this summer.

Between August 1913 and January last the contractors removed about 32,000 yards of rock from the submarine channel above dam No. 6. There is yet to be excavated in this cut 35,000 yards of rock distributed over a distance of about 3,100 feet, which will take them most, if not all, of this season to complete.

The contractors should easily complete the contract this season.

The hydro-electric plant of the Sidney Power Company at dam No. 5 was placed in commission on January 28, 1913. The power house, tail race and grounds were fully completed last summer and present a fine appearance. The plant has been in constant operation since it was placed in commission.

Section No. 3.—This section extends from Frankford to a point three miles west of Glen Ross, a distance of about $7\frac{1}{2}$ miles. At Glen Ross there is a lock, dam and two bridges.

A contract for the work was entered into with the Canadian General Development Company, Limited, on April 24, 1908. The total value of work done and materials delivered up to March 31, 1914, amounted to \$181,042.32, or about 63 per cent of the value of the work.

The lock, dam, bridges and part of the short canal at Glen Ross were finished in the fall of 1909, since which date no work has been done on the section until a month ago. On February 9, 1914, the company assigned the contract to Fred A. Robertson and Company, who are now building a dredging plant at Glen Ross for the purpose of proceeding with the completion of the excavation.

Section No. 4.—This section extends from Adam's Landing, a point three miles west of Glen Ross to Campbellford, a distance of about 14 miles. There are between Bradley Bay and Campbellford, 5 locks, 3 dams, 4 bridges and about 1 mile of concrete retaining wall for enclosing the river through the town of Campbellford, together with a large quantity of earth and rock excavation.

A contract for the work was entered into with Messrs. Hancy, Quinlan and Robertson on June 22, 1910. The total value of the work done and materials delivered up to March 31, 1914, amounted to \$936,012.62, or about 70 per cent of the value of the contract.

The five locks are finished. Dam No. 8 is finished. Dam No. 9 is half built and will be finished this summer. Dam No. 10 is partly built, but its completion is held up pending the construction of the Grand Trunk Railway main line bridge at Campbellford. All bridges on the contract are finished with the exception of the Grand Trunk Railway main line bridge which has not yet been begun.

The river walls through Campbellford are finished with the exception of a small piece through the Grand Trunk Railway embankment at the east end of the present railway bridge across the river.

The principal item of work remaining to be done on this contract is earth excavation. There are yet 190,000 yards of dredging in Bradley Bay to be done, which work the contractors will not begin until they can bring a dredging plant in from Lake Ontario. There are yet 60,000 yards of excavation in the canal prism between locks 8 and 9, the removal of which is being proceeded with. The concrete yet to build on the section is about 9,000 yards, chiefly in dams 9 and 10. Owing to the dredging in Bradley Bay it will take two years to complete this contract.

Section No. 5.—This section extends from Campbellford to Crow Bay, a distance of three miles. On the section are two locks, 2 dams and about half a mile of concrete wall for enclosing the river through Campbellford. A contract for the work was entered into with Messrs. Brown and Aylmer on September 28, 1907. The contract was amended on May 30, 1911, so as to include the construction of the river walls through Campbellford at the lower end of the section.

The total value of work done and materials delivered up to the 31st March, 1914, amounted to \$612,420.21, or about 91 per cent of the value of the contract.

The whole of the works embraced in the contract are completed with the exception of some dredging in the river channel below lock 13, which cannot be completed by the contractors until such time as the level of the river is raised to normal navigation level, so as to enable them to float their dredging plant over the site of the excavation yet to be removed. The level of this reach cannot be raised until dam No. 10, on section 4, is finished.

Section No. 6.—This section extends from the lower end of Crow Bay to 1,000 feet west of Heeley Falls bridge, a distance of three miles. There are three locks, one dam and one bridge on the section, together with a large quantity of earth and rock excavation. The short canal at this point is located on the west side of the river, and is designed to overcome the 76-foot rise between Crow Bay and the 14 miles of river reach between Heeley Falls and Hastings.

A contract for the work was entered into with Messrs. Haney, Quinlan & Robertson on the 23rd May, 1910. The total value of work done and materials delivered up to the 31st March, 1914, amounted to \$457,635.14, or about 87 per cent of the total value of the contract. The three locks are finished and also their upper entrance piers, with the exception of the lower piers of lock 15, which will be built this summer.

The temporary unwatering culverts of the closed section of the Heeley Falls dam were closed on Sunday, the 16th November, 1913, on which date the sluices in the dam were placed in commission. The concrete work of the dam was finally completed on the 15th December, 1913.

The principal work remaining to be done on the section is the excavation of the lower entrance to lock 15, and the back filling of the lock walls, the whole of which should be completed early this season.

Throughout the past year the Eastern Power Company have been proceeding energetically with the construction of their hydro-electric plant at Heeley Falls, and now have the power house well advanced towards completion. Two units are partly installed and the tail race from the power house to Bradley Bay is said to be excavated to grade for a width of 30 feet. One unit was connected up in a temporary manner last fall, and was tried out on the 23rd November, and connected up under load with the rest of the Electric Power Company's system on the 30th November, 1913, since

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which date it has been running in a more or less intermittent manner, depending on current required for carrying the load on the Company's system.

Section No. 7.—This section extends from Heeley Falls to Rice Lake, a distance of about $19\frac{1}{2}$ miles. The principal works consist of a large quantity of earth and rock dredging in the river, the construction of a new lock and dam at Hastings, a new and longer swing span at Trent Bridge, and new guide piers for the G. T. railway bridge at Hastings.

The contract for the work was entered into with the Randolph Macdonald Co., Limited, on the 4th January, 1909. The total value of work done and materials delivered up to the 31st March, 1914, amounted to \$377,514.75, or about 88 per cent of the value of the contract.

The new lock was placed in commission on March 30, 1911, and the new dam in October, 1912. The new swing span at Trent Bridge was placed in commission on the 5th June, 1911, and the guide piers for it were finished last August. The new channel through Trent Bridge has been dredged to grade for full width, but it is not cleaned up. All the structures on the section are finished with the exception of a few channel piers.

The principal work remaining to be done is dredging, which the contractors hope to complete early next fall.

BRIDGES.

On the 30th June, 1911, a contract was entered into with the Hamilton Bridge Works Company, Limited, for the manufacture and erection of a "Strauss" Highway Bascule Bridge for the canal at Bridge street, Campbellford, Ont. The bridge is a single leaf of the heel trunnion type consisting of 108 feet through truss movable span and 35 foot tower span carrying the counterweight.

The erection of the bridge was far enough completed to permit it being placed in commission on the 21st March, 1913, since which date the bridge has been completed and a final estimate returned for it.

The Canadian General Electric Company provided the electrical equipment for the bridge under a contract dated the 28th October, 1912. The equipment is fully installed and tested, but has not yet been finally accepted as there are a few minor adjustments to be made to some parts of the machinery.

On the 12th November, 1912, a contract was entered into with the Hamilton Bridge Works Company, Ltd., for the manufacture and erection of a Strauss Railway Bascule and fixed span bridge for carrying the Northumberland Paper Mills Railway siding over the canal at Campbellford. The bascule is a single leaf, single track bridge, consisting of an 83 foot through plate girder movable span and a tower carrying the counterweight. The fixed span is a semi-through plate girder 77 feet long. The bridge is now completely erected and finished.

On the 4th March, 1913, a contract was entered into with the Canadian General Electric Company for the electrical equipment required for the operation of the bridge. The work of installing the equipment has been finished and the company are now operating the bridge during a period of 30 days, as provided for under their contract. The electrical equipment of this bridge has been installed in a first class manner and reflects great credit on the workmanship, care and attention given to its manufacture and erection by the company.

VALVES FOR LOCKS.

Wagon valves.—The contract for the manufacture and erection of the wagon valves required for the new locks and regulating culverts of the Ontario-Rice Lake division of the canal was entered into with the Dominion Bridge Company, Ltd., on the 15th October, 1908.

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All the valves have been installed in place and the work is entirely completed with the exception of the adjustment and field painting of the valves at locks 8, 9, 10, 13 and 15, which will be fully completed some time this summer.

LOCK GATE OPERATING MACHINES.

Mr. Herbert B. Collier's contract, dated 7th May, 1909, for the supply and delivery of operating machines, anchorage fittings and pivots required for the lock gates of the new locks along the canal was fully completed in October, 1913, at a total cost of \$76,078.06. These machines, etc., were manufactured and installed for Mr. Collier by the Wm. Hamilton Company, Peterborough.

EMERGENCY DAMS.

The Dominion Bridge Company's contract dated the 5th April, 1911, for the supply, delivery and erection of 7 sets of steel stop logs and bridges for emergency dams was fully completed in November, 1913, at a total cost of \$50,711.

These structures have been placed at the heads of locks situated at the lower end of long river reaches or lakes, and are intended for use in case through accident connection is established between the upper and lower levels by a stream through the lock chamber of such velocity that the mitring gates could not be closed until the current was checked. In general the structure consists of a small deck girder swing bridge of unequal arms carrying a trolley car and winches for handling and placing the 5 steel stop logs for closing the head of the lock. These logs when not in use are stored on the short arm of the bridge and act as a counterweight for balancing the bridge when swinging it.

LOCK GATES.

On the 8th August, 1913, a contract was entered into with Messrs. Roger Miller & Sons, Ltd., for the manufacture and erection of lock gates for the Ontario-Rice Lake Division.

The contract calls for the construction and erection in the locks of 32 pairs of gates, and the construction and storing of 8 pairs of spare gates. All the timber and practically all the metal work has been delivered on the ground. On the 31st March, 1914, 18 pairs of gates were in various stages of construction and the contract at that date was about 60 per cent finished.

Owing to the unfinished condition of the dredging, dams and bridges between Trenton and Hastings it is doubtful if the gates will be all stepped in the locks this season.

PONTOON GATE LIFTER. -

On September 2, 1913, a contract was entered into with Messrs. M. Beatty and Sons, Limited, for the manufacture and erection complete of a steel pontoon gate lifter for stepping the lock gates of the Ontario-Rice Lake division.

The hull is built of steel plates and structural steel sections throughout and is constructed with sloping ends with rounded corners and bilges for the purpose of easy towing over long distances. The hull at deck level is 55 feet long by 27 feet 6 inches wide. The depth of the hull is 9 feet. It is provided with rolling ballast tub equipments under deck and carries a derrick, the lower part of which is firmly riveted to the hull. The upper part of the derrick is movable, so that it can be lowered for passing under overhead bridges. The machine is designed for handling a gate leaf 37 feet high over timbers, and weighing 50 tons.

The machine to-day is practically completed and ready for testing and will probably be delivered at Trenton by the end of this month.

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NASSAU DAM.

Last September plans and specifications were prepared for the construction of a new concrete dam at Nassau to replace the present wooden structure which is in a leaking condition. Tenders were invited for the work and that of Messrs. Chambers, McCaffrey and McQuigge was accepted, but so far no work has been done.

FENELON FALLS DAM.

Last spring a plan and specification was prepared for the construction of a new concrete dam at Fenelon Falls to replace the old wooden dam at that point. Tenders were invited for the work and a contract entered into on the 12th June, 1913, with Messrs. McPhee and Kehoe, for the construction of the new dam.

At the close of last season the contractors had completed the construction of 6 sluices and 7 piers with the platforms across the top of them. These six sluices of the new dam were placed in commission on the 11th November. There are yet to build three sluices at the north end and 4 sluices at the south end of the dam, all of which will be completed early this season. The total value of the work done and materials delivered up to the 31st March, 1914, amounted to \$15,169.70, or about 43 per cent of the value of the contract.

BOBCAYGEON.

Last fall a survey was completed at Bobcaygeon with the object of preparing plans and specifications for the construction of a new lock at this point to the same dimensions as that of the locks on the Ontario-Rice Lake division. The present lock has been in commission since 1857 and owing to settlement, its walls are in bad condition. The material on which the lock is built and through which the canal at the head of it is excavated consists of masses of rock, boulders, gravel, etc., through which the water leaks in large volume and renders the operation of the present lock very difficult. Owing to these causes it has now been decided to build a new lock at this point and tenders will be asked for the work as soon as the plans and specification are ready.

SEVERN RIVER DIVISION.

During the past two years a complete survey of the Severn river has been made with the object of preparing plans and specifications for the work of canalizing the river to the same dimensions as the Ontario-Rice Lake division. The various outlets or mouths of the river have been thoroughly surveyed and sounded, and also the north shore of Matchedash bay, for the purpose of determining the best harbour for the northern terminal of the canal. After careful consideration South Honey harbour has been adopted as the northern terminus. From the harbour the canal will follow the land locked channel around Beausoleil island and Skylark rock into Matchedash bay. A small lock will also be built at Port Severn to give access to Gloucester pool from the Waubaushene district.

At the head of Gloucester Pool a short canal with two locks will be built around the south shore of the river to pass the Little and Big Chutes, while at Swift Rapids a single lock will overcome the rise now existing at Ragged Rapids which will then be drowned out. The Orillia hydro-electric plant at Ragged Rapids will be moved down to the new dam at Swift Rapids. At Washago a short canal about two miles in length will be built across the neck of land between Severn Bridge and Couchiching Lake.

This division embraces 43 miles of all river route between deep water at Skylark Rock in Matchedash Bay and deep water in Couchiching Lake. This stretch of

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canalized river and lake will comprise when completed 4 miles of canal; 5½ miles of submarine channel, and 33¾ miles of deep river and lake navigation whose minimum width will be about 200 feet. The rise between extreme low water level of Lake Huron and normal navigation level of Couchicing Lake is about 139¾ ft., which rise will be overcome by 5 locks with lifts ranging from 14 to 47 feet. Thirteen concrete dams with stoplog sluices will be required for the regulation of the river, six of these will be small dams at Washago. With a low water flow of 800 S.F. the gross H.P. on the river between Wasdell Falls and the Georgian Bay is about 12,000. Hydro-electric developments are in operation to-day at Ragged Rapids and Big Chute and another plant is in course of construction at Wasdell's Falls. It is probably only a question of a short time when the H.P. of the river will be fully developed to supply electrical energy for distribution along the east shore of Lake Huron.

The normal navigation level of the natural reaches of the river and Sparrow and Couchicing Lakes will be, in the majority of cases, that of ordinary summer level, so that practically no damage will be done by flooding the land along the river and lake shores. The dams will hold the reaches at as high a level as practicable, which, in the majority of cases, will be lower than the top of the river banks. The canals and channels with banks showing above water will have a minimum bottom width of 80 feet and the submerged channels will have a minimum bottom width of 100 feet, which will be marked where necessary by small piers and range lights. The canals and submarine channels will have a minimum depth of 9 feet at normal water level.

There will be eight steel bridges, five of which will be for highway and three for railway traffic. One railway and three highway bridges will be swing spans, the remainder being high level fixed bridges. In the latter case the minimum clear head room will be 35 feet between normal water and the lowest steel. The locks will be of concrete and will have 8 feet 4 inches of water on the sills, with chambers 33 feet wide by 175 feet long between hollow quoins. They will accommodate barges of 1,000 tons whose size will be 150 feet long by 30 feet beam and drawing 8 feet of water. Entrance piers of not less than 150 feet in length will be provided above and below each lock. The locks will generally be filled through culverts 4 feet wide by 5 feet high formed in the side walls. They will be provided with wagon or cylindrical valves for controlling the water. The mitering lock gates will be of the solid timber type and the upper gates in all cases will be set on the top of lift walls. The mitering lock gates will be operated by struts or bars worked by hand power winches set in recesses formed in the side walls.

For construction purposes the division has been divided into four sections, two of which are under contract and plans and specifications for another are now ready for advertising the work for tenders. The plans and specifications for Section No. 1 will be ready for advertising the work in the autumn of this year.

Port Severn Section.—This section comprises the construction at Port Severn of a lock of 14.5 feet lift, 100 feet long between hollow quoins and 25 feet wide with 6 feet depth of water on the mitre sills, and the main regulating dam at the mouth of the river, together with several smaller dams in the immediate vicinity of Port Severn, and the necessary excavation at the upper and lower entrances of the lock for providing a channel 6 feet deep at normal water level.

A contract for the work was entered into with the York Construction Company, Limited, on September 24, 1913. The total value of work done and materials delivered up to March 31, 1914, was \$7,749.88. The principal item of work done to date is the excavation for the lock which will be built this summer.

Section No. 2.—This section extends from the end of section 1, at Big Chute to a point about half a mile above Macdonald rapids, a distance of about 11½ miles. The contract includes a regulating dam on Pretty channel north of the Big Chute, a regulating dam about 70 feet high with a lock and power house at Swift rapids and the re-construction of the Canadian Northern Railway bridge at Ragged Rapids, together

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with a lot of granite rock excavation. The lock at Swift rapids is unique inasmuch as it will probably, when completed, have the highest lift of any lock of this type in North America. The width of the lock is 33 feet, with a usable length of 165 feet and a depth of 8 feet 4 inches on the lock sills. The lift of the lock is 47 feet and it will be provided with a vertically operated steel gate at the lower end. The maximum clearance under the gate when raised above normal water will be 35 feet.

STREAM MEASUREMENT.

The Trent river has its head in Rice lake, and for some distance flows in a north-easterly direction forming the boundary between Peterborough and Northumberland counties; it then flows through the latter in a southerly and easterly direction to Hastings county through which it flows in a southerly direction along its west side to Trenton on the bay of Quinte, lake Ontario.

The Trent river has a watershed of about four thousand eight hundred and thirty-six square miles distributed very approximately as follows: Above Heeley Falls, 3,705 square miles; the Crow river, 620 square miles; between Heeley Falls and Trenton, 511 square miles. It will be seen that the greater portion lies above Heeley Falls, and this is principally north and west of Rice lake in the counties of Peterborough, Victoria and Haliburton. This northern and western portion of the watershed supplies the chain of lakes forming the Trent navigation which drains into the Otonabee river and thence to Rice lake. This chain of lakes, sometimes called the Kawartha lakes, is fed from the north by Jack's creek, Eel's creek, Deerbay creek, Mississauga river, Squaw river, Nogie's creek, Burnt and Gull rivers, and, from the south, by the Scugog river and Emily and Pigeon creeks. Generally the lakes divide the granites and gneisses on the north from the limestones and agricultural lands on the south. The former are yet more or less covered with hemlock, spruce and other soft woods and some fine ridges of merchantable hardwoods. South of the lakes the country is almost denuded of timber. The pine in the Trent watershed is practically exhausted. The principal tributary of the Trent river east of Rice lake is the Crow river.

On the Gull and Burnt rivers some expenditure has been made for conservation purposes in rebuilding old dams in concrete or timber, while many timber dams on the smaller tributaries are also being maintained in an efficient condition for conservation and for the lumber interests. The water so stored is, however, largely, if not all, drawn off by the lumbermen during the first half of the summer period for log driving down the tributaries, and, later, for flushing logs down the Otonabee river. The result is that the reservoirs formed as above for conservation purposes are usually drained off, and for all practical purposes "dry" by the middle of August of each year, to the detriment of the power users, who want a definite maximum low water flow established during the latter part of the summer and continuously through the fall months of each year.

The waste of water by the lumber interests can only be checked by a continuous and efficient series of log slides, as may be required, along the route of the principal tributaries north of the main chain of lakes and continuously from the latter down the Otonabee to Peterborough.

Two sharp crested weirs for stream measurement have been built and several gauging and metering stations have been established on the river and its tributaries, principally for statistical purposes, but these records will also be valuable at some future date in determining the possibility of maintaining a fixed definite maximum low water flow for power purposes.

Attached to this report are tables showing the discharge of the Crow River for the years 1911-12 and 13, over a weir built a short distance above Crow Bay into which the river discharges. This weir was built and placed in commission during October, 1910. The watershed tributary to it amounts to 620 square miles.

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Attached to this report are also tables showing the daily discharge of the river over the weir at Heeley Falls, for the years 1912 and 1913. The weir was built and placed in commission during November, 1911. The watershed tributary to it amounts to three thousand seven hundred and five square miles.

Tables drawn up from the above are also given representing the discharge over the Heeley Falls and Crow river weirs jointly, this being the discharge or flow of the Trent river at Campbellford for the years 1912 and 1913.

There are also attached tables giving the total actual monthly discharge in cubic feet from the weir measurements at Crow river and Heeley Falls, and the deduced flow in cubic feet per second respectively.

Three diagrams are also attached showing the flow of the Crow and Trent rivers.

Diagram No. 1 represents the discharge in cubic feet per second of the Crow river, as measured over the sharp crested weir at Crow river, for the years 1911, 1912, 1913 and a portion of the present year 1914.

Diagram No. 2 represents the discharge in cubic feet per second of the Trent river, as measured over the sharp crested weir at Heeley Falls, for the years 1912, 1913 and a portion of the present year 1914.

Diagram No. 3 represents a combination of diagram No. 1 and diagram No. 2 and gives the flow of the Trent river past Campbellford, for the years 1912, 1913 and a portion of the present year, 1914.

It will be noticed that the flow past Campbellford has been taken as the sum of the flow from Crow river and Heeley Falls; it would be more accurate to say that the flow past Campbellford in this report is "referred" to the actual weir measurements taken at Crow river and Heeley Falls. The flow into the river between these latter points and Campbellford, however, when considered in reference to rainfall and evaporation will not materially affect the figures given.

It is interesting to compare the results given in this report with the rainfall at some definite position. In what follows the rainfall at Peterborough, Ontario, is taken as the reference.

For the year 1912 the Peterborough rainfall was 39.25 inches or equal to 2.89 cubic feet per second per square mile.

The Crow river watershed with an area of 620 square miles thus shows a total rainfall for the year of 620×2.89 or 1,790 cubic feet per second.

The Heeley Falls watershed with an area of 3,705 square miles thus shows a total rainfall for the year of $3,705 \times 2.89$ equals 10,700 cubic feet per second. These two results show a total of 12,490 cubic feet per second.

From the figures given in this report for the year 1912 the "ratio" of "run-off" to "rainfall" for the Crow River watershed is equal to 57 per cent. For the Heeley Falls watershed 43.6 per cent and for the flow past Campbellford 45.4 per cent.

For the year 1913 the Peterborough rainfall was 24.11 inches or equal to 1.778 cubic feet per second per square mile.

The Crow River watershed with an area of 620 square miles thus shows a total rainfall for the year of 620×1.778 or 1,100 cubic feet per second.

The Heeley Falls watershed with an area of 3,705 square miles, thus shows a total rainfall for the year of $3,705 \times 1.778$ or 6,575 cubic feet per second.

These two results show a total of 7,675 cubic feet per second.

From the figures given in this report for the year 1913 the "ratio" of "run-off" to "rainfall" for the Crow River watershed is equal to 69.2 per cent, for the Heeley Falls watershed 56.2 per cent, and for the flow past Campbellford 58.1 per cent.

The average rainfall at Peterborough for the past fourteen years is about 31.95 inches. It will thus be seen that the rainfall for 1912 is above the average and the rainfall for 1913 below the average by an almost equal amount. The variation in the ratio of flow to rainfall is curious, and interesting, and would indicate considerable variation in local rainfalls over the district and doubtless variations in humidity and seepage.

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LAKE SURVEYS.

Some field work was done during the past year on the hydrographic survey begun six years ago, of the chain of lakes which form part of the Trent waterway. The field work done to date has also been plotted. It is the intention to continue the field work this summer.

A few photographs of the work on the Ontario-Rice Lake Division accompany this report.

I am, sir,

Your obedient servant,

ALEX. J. GRANT,
Superintending Engineer.

TABLE No. 1A.

DAILY discharge of the Crow River for 1911.

Days.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	352	131	150	593	2,094	851	663	274	195	167	161	811
2.....	330	131	150	595	2,006	787	625	274	187	160	171	807
3.....	309	131	150	611	1,985	791	589	272	178	161	189	811
4.....	294	131	150	554	1,906	787	554	268	165	155	199	807
5.....	294	131	150	511	1,958	801	520	268	161	146	219	801
6.....	294	131	150	472	1,885	797	486	268	171	140	229	797
7.....	294	135	155	662	1,838	713	453	261	183	136	250	791
8.....	294	135	155	888	1,767	626	413	255	199	135	261	777
9.....	287	135	155	1,135	1,694	557	382	248	213	141	283	821
10.....	280	140	155	1,408	1,638	589	345	248	205	140	302	867
11.....	275	140	155	1,464	1,593	629	345	248	201	141	325	913
12.....	267	140	155	1,506	1,538	672	352	248	193	145	347	961
13.....	267	140	155	1,538	1,469	723	352	248	189	156	367	1,008
14.....	261	145	150	1,728	1,379	767	360	242	193	160	432	1,273
15.....	261	145	150	1,912	1,301	841	360	235	201	161	503	1,580
16.....	255	145	150	2,088	1,226	898	352	229	205	160	575	1,899
17.....	248	150	145	2,313	1,163	965	345	229	201	156	644	1,864
18.....	248	150	145	2,391	1,091	951	337	223	193	155	723	1,819
19.....	248	150	140	2,471	1,030	944	337	217	189	156	738	1,772
20.....	242	150	140	2,566	951	940	337	217	182	150	771	1,710
21.....	242	145	140	2,560	944	934	337	211	172	151	787	1,656
22.....	229	145	140	2,580	940	909	330	205	165	150	811	1,600
23.....	217	145	140	2,589	934	892	323	205	161	151	817	1,543
24.....	198	150	160	2,595	951	867	309	211	171	150	821	1,476
25.....	187	150	182	2,486	976	851	295	217	183	151	817	1,396
26.....	182	150	205	2,405	993	827	288	217	193	150	821	1,320
27.....	176	150	229	2,313	997	811	281	211	213	151	807	1,260
28.....	171	150	382	2,248	982	767	274	211	187	150	801	1,181
29.....	160	.....	563	2,186	976	723	274	211	172	151	797	1,106
30.....	149	.....	572	2,136	972	681	274	211	171	155	801	1,036
31.....	140	.....	581	.....	913	.....	274	211	.....	156	.....	997
	7,651	3,971	6,299	51,504	42,150	23,891	11,766	7,293	5,592	4,687	15,769	37,460
Mean.....	247	142	203	1,717	1,359	796	379	235	186	151	525	1,208
Highest.....	352	150	581	2,595	2,094	965	663	274	213	167	821	1,899
Lowest.....	140	131	140	472	913	557	274	205	161	135	161	777

TABLE No. 1B.

DAILY discharge of the Crow River for 1912.

Days.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	965	777	424	448	3,242	3,600	554	302	235	229	992	1,047
2.....	929	738	413	445	3,062	3,593	494	302	229	229	939	1,047
3.....	913	723	408	523	2,757	3,593	464	283	229	229	888	1,047
4.....	878	710	397	589	2,589	3,600	469	261	229	229	837	1,091
5.....	851	694	393	666	2,477	3,593	390	248	229	229	787	1,136
6.....	827	672	390	738	2,356	3,413	370	250	229	229	787	1,180
7.....	723	620	393	903	2,248	3,242	352	248	229	229	776	1,226
8.....	626	563	390	1,114	2,186	3,062	330	248	229	229	768	1,261
9.....	540	506	393	1,260	2,123	2,384	311	250	229	229	857	1,296
10.....	537	453	390	1,513	2,061	2,376	309	248	229	223	950	1,355
11.....	549	456	385	1,798	1,979	2,370	309	248	229	217	1,058	1,343
12.....	545	453	374	2,061	1,925	2,256	311	250	229	217	1,156	1,320
13.....	549	456	377	2,347	1,877	2,177	309	254	229	217	1,255	1,296
14.....	545	453	374	2,619	1,819	2,075	316	261	229	217	1,355	1,272
15.....	549	456	377	2,928	1,746	1,979	325	270	229	217	1,463	1,256
16.....	545	461	374	3,235	1,838	1,877	323	268	229	217	1,588	1,215
17.....	566	464	377	3,567	1,898	1,754	323	268	229	217	1,562	1,180
18.....	580	520	382	3,895	1,958	1,663	318	263	229	211	1,537	1,146
19.....	599	575	385	4,264	2,034	1,493	309	254	223	217	1,513	1,114
20.....	607	626	390	4,648	2,136	1,296	309	254	217	217	1,487	1,080
21.....	611	611	393	4,601	2,111	1,135	304	257	217	217	1,463	1,047
22.....	607	581	397	4,576	2,319	976	302	261	223	217	1,427	1,004
23.....	611	557	400	4,548	2,442	972	295	261	229	274	1,403	972
24.....	635	537	397	4,486	2,595	961	297	250	229	337	1,378	929
25.....	666	514	408	4,458	2,754	955	295	229	229	405	1,567	890
26.....	690	494	405	4,204	2,913	940	302	217	235	485	1,355	867
27.....	723	472	416	3,987	3,062	929	304	225	235	653	1,260	826
28.....	758	461	421	3,793	3,179	861	302	229	235	847	1,192	787
29.....	801	453	440	3,600	3,268	787	295	233	229	1,047	1,114	787
30.....	827	.....	450	3,413	3,387	700	297	244	229	1,037	1,046	787
31.....	811	.....	453	.....	3,494	.....	302	242	.....	1,004	.....	787
	21,163	16,056	12,366	81,217	75,835	60,622	10,490	7,878	6,858	10,971	35,760	33,600
Mean.....	683	553	399	2,707	2,446	2,019	338	254	229	354	1,192	1,084
Highest.....	965	777	453	4,648	3,494	3,600	554	302	235	1,047	1,588	1,355
Lowest.....	540	453	374	448	1,746	700	295	217	217	211	768	787

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TABLE No. 10.

DAILY discharge of the Crow River for 1913.

Days	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	777	1,256	768	3,527	2,103	700	294	229	122	40	45	122
2.....	777	1,261	768	3,626	2,007	653	302	229	122	35	48	122
3.....	777	1,261	768	3,760	1,938	607	308	229	122	31	50	134
4.....	768	1,272	768	3,862	1,872	595	308	223	126	25	53	155
5.....	768	1,226	729	3,980	1,805	589	302	217	131	24	53	171
6.....	768	1,169	700	4,100	1,714	581	294	217	126	21	56	193
7.....	768	1,124	672	4,222	1,551	572	288	211	122	21	56	217
8.....	710	1,067	644	4,363	1,367	520	280	199	122	23	58	242
9.....	662	939	617	4,345	1,204	469	280	192	122	29	61	268
10.....	617	836	581	4,327	1,136	413	280	199	122	31	64	280
11.....	572	718	554	4,292	1,067	405	280	211	126	33	67	294
12.....	589	700	662	4,274	992	405	275	217	131	38	70	308
13.....	607	690	787	4,170	929	397	268	192	117	40	73	309
14.....	625	672	909	4,049	909	397	261	196	106	43	73	316
15.....	672	662	1,047	3,945	888	390	248	140	96	43	77	323
16.....	718	690	1,057	3,827	867	383	261	140	86	45	80	330
17.....	777	729	1,079	3,709	888	374	275	135	86	45	83	330
18.....	826	768	1,091	3,593	909	367	280	135	86	48	86	323
19.....	899	739	1,272	3,429	929	383	294	131	86	50	86	323
20.....	972	729	1,476	3,300	950	397	280	131	86	53	89	323
21.....	1,047	710	1,676	3,156	939	374	268	131	86	56	93	330
22.....	1,136	700	1,898	2,983	939	352	255	131	86	56	103	338
23.....	1,226	710	2,242	2,906	929	330	255	131	83	56	113	338
24.....	1,320	710	2,619	2,799	899	308	248	131	80	56	126	338
25.....	1,404	718	3,029	2,723	878	308	242	131	77	56	140	330
26.....	1,355	729	2,723	2,603	857	309	242	131	73	53	135	330
27.....	1,296	739	2,428	2,486	826	308	242	131	74	50	126	330
28.....	1,256	757	2,157	2,384	817	309	235	131	64	50	122	338
29.....	1,256	.....	1,898	2,270	797	302	235	131	53	48	122	338
30.....	1,256	.....	2,384	2,186	777	204	235	131	45	45	122	338
31.....	1,256	.....	2,922	.....	768	.....	235	126	.....	45	.....	338
	28,457	24,281	42,925	105,196	35,451	12,791	8,350	5,209	2,964	1,289	2,530	8,769
Mean.....	918	867	1,383	3,506	1,143	426	269	168	98	41	84	285
Highest.....	1,404	1,272	3,029	4,363	2,103	700	308	229	131	56	140	338
Lowest.....	572	662	554	2,186	768	294	235	126	45	21	45	122

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TABLE No. 2A.

DAILY discharge of the Trent River at Heeley Falls for 1912.

Days	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	5,641	2,801	2,075	2,423	13,642	13,182	4,735	1,748	1,790	2,006	2,804	5,708
2.....	5,313	2,782	2,075	2,279	13,387	13,387	4,587	1,600	1,790	1,877	2,804	5,582
3.....	5,146	2,660	2,042	2,592	13,387	14,147	3,131	1,562	1,790	1,813	2,706	5,613
4.....	5,005	2,660	2,010	2,675	12,935	15,090	2,371	1,600	1,790	2,029	2,656	5,677
5.....	5,005	2,676	2,010	2,500	12,730	15,090	2,257	1,600	1,600	2,139	2,831	5,582
6.....	4,876	2,423	1,978	2,675	12,483	15,090	1,520	1,421	1,581	2,075	2,656	5,677
7.....	4,772	2,676	1,978	4,572	12,080	14,360	2,029	1,304	1,600	2,075	2,633	5,898
8.....	4,724	2,591	2,010	5,529	11,837	14,147	2,561	1,360	1,520	1,984	2,633	5,708
9.....	4,724	2,423	2,155	6,488	11,837	13,642	2,185	1,389	1,520	1,965	3,211	5,552
10.....	4,517	2,319	2,074	7,001	11,400	13,642	2,075	1,459	1,520	1,854	4,157	4,587
11.....	4,517	2,319	1,978	7,480	10,929	13,387	2,075	1,562	1,478	1,832	4,355	5,214
12.....	4,395	2,319	1,978	7,480	10,389	12,977	1,984	1,600	1,303	1,767	5,001	5,461
13.....	4,395	2,782	2,075	7,388	9,857	12,483	2,185	1,683	1,284	1,919	5,001	5,274
14.....	4,190	2,591	2,042	7,070	9,447	12,038	2,185	1,706	1,246	2,075	5,244	5,898
15.....	4,053	2,591	2,155	7,987	8,463	11,639	2,185	1,611	1,246	2,029	5,214	6,251
16.....	3,876	2,506	2,155	9,264	8,535	11,164	2,371	1,581	1,246	2,006	5,898	6,639
17.....	3,837	2,676	2,075	9,447	8,679	10,929	2,371	1,581	1,246	2,006	5,803	6,411
18.....	3,837	2,556	2,107	9,857	7,862	10,235	1,984	1,581	1,303	1,520	5,552	6,346
19.....	3,719	2,436	2,171	10,697	7,691	10,507	2,185	1,611	1,322	1,284	5,772	6,251
20.....	3,641	2,436	2,206	11,126	7,516	10,085	2,139	1,539	1,440	1,421	5,803	6,217
21.....	3,507	1,901	2,081	11,598	7,896	9,447	2,185	1,520	1,440	1,478	5,803	5,928
22.....	3,489	2,155	2,137	12,080	8,003	8,075	1,919	1,520	1,501	1,478	5,928	5,708
23.....	3,300	1,837	2,226	12,730	8,250	6,939	1,919	1,813	1,581	1,813	5,803	5,491
24.....	3,244	2,171	2,096	12,935	8,862	6,973	1,919	1,919	1,581	2,075	5,738	5,335
25.....	3,281	2,171	1,973	13,182	8,641	7,311	1,919	2,029	1,611	2,208	5,647	5,335
26.....	3,207	1,901	1,977	13,182	8,824	6,247	1,725	2,117	1,664	2,804	5,898	5,335
27.....	3,189	1,978	2,309	14,147	8,968	5,396	1,683	2,098	1,984	2,854	6,251	5,244
28.....	2,962	1,901	2,491	14,189	9,447	5,214	1,706	1,942	1,942	2,683	5,803	5,183
29.....	2,766	1,978	2,299	13,893	9,595	5,062	1,748	1,896	1,942	2,683	5,613	5,305
30.....	2,854	.....	2,259	13,391	10,933	4,853	1,748	1,832	1,919	2,804	5,898	5,461
31.....	2,854	.....	2,331	.....	12,282	.....	1,748	1,832	.....	2,804	.....	4,822
	124,836	69,216	65,528	257,857	316,787	323,238	69,334	51,616	46,780	63,360	141,116	174,693
Mean.....	4,027	2,386	2,114	8,595	10,219	10,775	2,237	1,665	1,560	2,044	4,704	5,635
Highest....	5,641	2,800	2,491	14,189	13,642	15,090	4,735	2,117	1,984	2,854	6,251	6,639
Lowest.....	2,766	1,837	1,973	2,279	7,516	4,853	1,520	1,304	1,246	1,284	2,633	4,587

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TABLE No. 2B.

DAILY discharge of the Trent River at Heeley Falls for 1913.

Days	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	4,587	5,244	3,340	11,601	12,038	2,880	1,854	1,341	1,600	1,170	1,246	1,459
2.....	4,442	3,287	2,903	12,038	11,837	2,782	1,854	1,341	1,136	1,170	1,026	1,501
3.....	4,355	3,473	2,512	12,038	11,601	2,804	1,748	1,341	1,303	1,170	1,045	1,520
4.....	4,385	4,328	2,880	12,730	11,126	2,831	1,459	1,284	1,341	1,170	1,151	1,642
5.....	4,241	4,970	3,314	14,748	10,697	2,782	1,581	1,303	1,379	1,117	1,098	1,813
6.....	4,131	5,062	3,314	15,006	9,857	2,683	1,748	1,303	1,421	1,136	1,098	1,611
7.....	4,131	5,274	3,238	15,223	9,375	2,706	1,623	1,303	1,402	1,117	1,045	1,636
8.....	3,990	5,214	2,903	15,660	7,862	2,538	1,581	1,303	1,402	1,117	1,045	1,803
9.....	3,823	5,062	2,930	15,660	7,551	2,561	1,581	1,402	1,379	1,136	1,151	1,921
10.....	3,580	4,883	2,930	15,572	7,619	2,611	1,600	1,284	1,379	1,098	1,189	2,267
11.....	3,131	4,735	3,029	15,702	7,174	2,611	1,246	1,284	1,379	1,136	1,440	2,164
12.....	3,340	4,735	2,903	15,922	7,209	2,561	904	1,284	1,360	1,136	1,501	2,164
13.....	3,006	4,704	3,131	15,835	6,840	2,538	988	1,303	1,402	1,117	1,360	1,921
14.....	3,131	4,587	3,420	15,702	6,186	2,075	1,117	1,303	1,303	1,098	1,832	1,664
15.....	3,287	4,442	4,214	15,922	5,897	1,117	1,064	1,360	1,227	1,026	2,371	1,772
16.....	3,340	4,328	4,355	15,748	5,613	958	1,098	1,360	1,170	992	000-0	1,258
17.....	3,447	4,271	4,560	15,660	5,552	756	1,136	1,379	1,246	992	559	1,739
18.....	3,990	4,131	4,617	15,660	5,461	840	1,189	1,284	1,265	1,011	1,284	1,642
19.....	4,100	4,047	4,674	15,572	5,335	958	1,227	1,265	1,246	992	1,303	1,801
20.....	4,214	3,933	4,704	15,090	4,587	1,227	1,189	1,208	1,246	958	1,402	1,664
21.....	4,822	3,906	5,062	15,090	3,933	1,421	1,208	1,208	1,284	1,045	1,360	1,581
22.....	5,396	3,713	5,274	14,961	3,770	1,725	1,227	904	1,303	973	1,421	1,501
23.....	5,491	3,659	5,582	14,748	3,367	1,600	1,284	1,151	1,421	992	1,600	1,678
24.....	5,647	3,606	5,928	14,402	2,371	1,813	1,341	1,227	1,402	1,045	1,520	2,002
25.....	5,738	3,743	6,217	14,147	2,831	1,877	1,322	1,322	1,379	1,117	1,539	1,804
26.....	5,552	6,580	6,639	13,726	2,880	1,942	1,379	1,520	1,402	1,098	1,478	2,177
27.....	5,305	3,473	7,482	13,349	2,903	1,965	1,341	1,706	1,421	1,045	1,402	1,642
28.....	5,396	3,367	8,862	12,688	3,006	1,832	1,341	1,790	1,379	1,117	1,402	1,978
29.....	5,214	.....	9,857	12,445	3,029	1,813	1,341	1,984	1,303	1,098	1,402	2,081
30.....	5,214	.....	10,389	12,282	2,880	1,813	1,303	1,984	1,170	1,098	1,402	2,100
31.....	5,183	.....	10,891	.....	2,804	.....	1,246	1,706	.....	1,098	.....	2,142
Total.....	135,609	119,757	152,054	434,927	193,191	60,626	42,120	42,737	40,050	33,585	38,672	55,648
Mean.....	4,374	4,277	4,905	14,498	6,232	2,021	1,359	1,379	1,335	1,084	1,333	1,951
Highest.....	5,738	5,274	10,891	15,922	12,038	2,880	1,854	1,984	1,600	1,170	2,371	2,267
Lowest.....	3,006	3,287	2,512	11,601	2,371	756	904	904	1,136	958	550	1,258

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TABLE No. 3A.

DAILY discharge of the Trent River at Campbellford, for 1912.

Days	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	6,606	3,578	2,498	2,871	16,884	16,782	5,289	2,050	2,025	2,235	3,797	6,755
2.....	6,242	3,521	2,487	2,724	16,449	16,980	5,081	1,901	2,019	2,106	3,744	6,629
3.....	6,059	3,383	2,450	3,114	16,144	17,740	3,595	1,845	2,019	2,042	3,594	6,660
4.....	5,883	3,370	2,007	3,265	15,524	18,690	2,841	1,861	2,019	2,258	3,494	6,769
5.....	5,856	3,370	2,402	3,166	15,208	18,683	2,647	1,848	1,829	2,368	3,618	6,718
6.....	5,703	3,094	2,367	3,413	14,839	18,503	1,890	1,671	1,810	2,304	3,443	6,858
7.....	5,495	3,296	2,370	5,475	14,328	17,602	2,381	1,551	1,829	2,304	3,409	7,123
8.....	5,350	3,154	2,400	6,643	14,023	17,209	2,891	1,609	1,749	2,213	3,401	6,969
9.....	5,264	2,928	2,548	7,748	13,960	16,026	2,496	1,640	1,749	2,194	4,018	6,848
10.....	5,054	2,772	2,464	8,513	13,461	16,018	2,383	1,707	1,749	2,077	5,108	5,941
11.....	5,066	2,775	2,363	9,278	12,908	15,757	2,383	1,810	1,707	2,049	5,413	6,556
12.....	4,940	2,772	2,352	9,541	12,324	15,233	2,295	1,850	1,532	1,984	6,157	6,781
13.....	4,944	3,238	2,452	9,735	11,737	14,660	2,494	1,938	1,513	2,136	6,256	6,571
14.....	4,735	3,044	2,417	9,689	11,266	14,113	2,501	1,967	1,475	2,292	6,599	7,170
15.....	4,602	3,047	2,532	10,915	10,209	13,618	2,510	1,881	1,475	2,246	6,676	7,507
16.....	4,421	2,966	2,530	12,500	10,372	13,041	2,694	1,848	1,475	2,223	7,484	7,853
17.....	4,403	3,140	2,452	13,014	10,578	12,583	2,694	1,848	1,475	2,223	7,364	7,591
18.....	4,417	3,076	2,489	13,752	9,820	12,399	2,302	1,844	1,532	1,730	7,089	7,492
19.....	4,318	3,012	2,556	14,961	9,725	12,000	2,494	1,866	1,545	1,501	7,285	7,365
20.....	4,248	3,062	2,596	15,774	9,652	11,381	2,448	1,793	1,657	1,638	7,289	7,296
21.....	4,118	2,512	2,474	16,199	10,008	10,582	2,489	1,777	1,657	1,695	7,265	6,975
22.....	4,096	2,736	2,535	16,606	10,321	9,051	2,221	1,781	1,724	1,695	7,355	6,712
23.....	3,911	2,395	2,626	17,278	10,692	7,911	2,214	2,073	1,810	2,087	7,205	6,463
24.....	3,879	2,708	2,494	17,422	11,457	7,934	2,216	2,169	1,810	2,412	7,116	6,264
25.....	3,947	2,686	2,381	17,641	11,395	8,266	2,214	2,258	1,840	2,613	7,213	6,234
26.....	3,897	2,395	2,382	17,387	11,736	7,187	2,027	2,333	1,899	3,290	7,252	6,202
27.....	3,912	2,450	2,725	18,135	12,030	6,325	1,987	2,322	2,219	3,507	7,511	6,070
28.....	3,720	2,362	2,911	17,982	12,625	6,075	2,008	2,171	2,177	3,530	6,995	5,971
29.....	3,567	2,431	2,738	17,493	12,863	5,849	2,043	2,130	2,171	3,730	6,726	6,092
30.....	3,681	.....	2,709	16,804	14,320	5,553	2,045	2,075	2,148	3,841	6,944	6,248
31.....	3,665	.....	2,784	.....	15,776	.....	2,050	2,073	.....	3,808	.....	5,609
Total.....	145,999	85,267	77,892	339,088	392,619	383,790	79,820	59,492	53,638	74,328	176,672	208,291
Mean.....	4,710	2,940	2,513	11,303	12,665	12,793	2,575	1,919	1,788	2,398	5,889	6,719
Highest..	6,606	3,578	2,911	18,135	16,884	18,690	5,289	2,333	2,219	3,841	7,511	7,853
Lowest...	3,567	2,362	2,007	2,724	9,652	5,553	1,987	1,551	1,475	1,501	3,401	5,609

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TABLE No. 3B.

DAILY discharge of the Trent River at Campbellford, for 1913.

Days	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	5,364	6,500	4,108	15,128	14,141	3,580	2,149	1,571	1,722	1,210	1,291	1,581
2.....	5,219	4,548	3,671	15,664	13,844	3,435	2,156	1,571	1,258	1,205	1,074	1,623
3.....	5,132	4,734	3,279	15,798	13,539	3,411	2,057	1,571	1,426	1,201	1,095	1,655
4.....	5,153	5,600	3,648	16,592	12,998	3,426	1,768	1,507	1,467	1,196	1,204	1,797
5.....	5,009	6,196	4,042	18,728	12,502	3,371	1,883	1,520	1,510	1,141	1,151	1,984
6.....	4,899	6,231	4,013	19,106	11,572	3,263	2,042	1,520	1,547	1,158	1,154	1,804
7.....	4,899	6,398	3,909	19,445	10,926	3,278	1,910	1,515	1,524	1,139	1,101	1,853
8.....	4,700	6,281	3,547	20,023	9,229	3,058	1,861	1,503	1,524	1,141	1,103	2,045
9.....	4,485	6,001	3,547	20,005	8,755	3,031	1,861	1,595	1,502	1,165	1,213	2,189
10.....	4,197	5,719	3,510	19,899	8,755	3,023	1,880	1,483	1,501	1,129	1,254	2,547
11.....	3,703	5,453	3,583	19,994	8,241	3,016	1,527	1,496	1,505	1,169	1,508	2,459
12.....	3,929	5,435	3,565	20,196	8,201	2,966	1,179	1,501	1,491	1,174	1,571	2,473
13.....	3,613	5,394	3,918	20,005	7,769	2,935	1,256	1,496	1,519	1,157	1,434	2,230
14.....	3,756	5,259	4,329	19,751	7,095	2,472	1,378	1,499	1,410	1,141	1,905	1,980
15.....	3,959	5,104	5,261	19,868	6,785	1,507	1,312	1,500	1,323	1,069	2,448	2,095
16.....	4,058	5,018	5,412	19,576	6,480	1,340	1,359	1,500	1,256	1,037	80	1,588
17.....	4,224	5,000	5,639	19,369	6,440	1,130	1,411	1,514	1,332	1,037	642	2,069
18.....	4,816	4,899	5,709	19,253	6,370	1,207	1,470	1,419	1,351	1,059	1,370	1,964
19.....	4,999	4,786	5,946	19,001	6,264	1,340	1,522	1,396	1,332	1,042	1,389	2,124
20.....	5,186	4,662	6,180	18,390	5,538	1,624	1,470	1,339	1,332	1,011	1,491	1,987
21.....	5,869	4,616	6,738	18,246	4,872	1,795	1,476	1,339	1,370	1,101	1,453	1,911
22.....	6,532	4,413	7,173	17,945	4,709	2,077	1,482	1,035	1,389	1,029	1,524	1,839
23.....	6,717	4,369	7,824	17,654	4,296	1,930	1,539	1,282	1,504	1,048	1,713	2,016
24.....	6,967	4,316	8,547	17,201	3,270	2,121	1,590	1,358	1,482	1,101	1,646	2,340
25.....	7,142	4,461	9,246	16,870	3,709	2,186	1,564	1,453	1,456	1,173	1,679	2,134
26.....	6,906	4,309	9,362	16,329	3,737	2,250	1,621	1,651	1,476	1,151	1,613	2,507
27.....	6,601	4,212	9,910	15,835	3,729	2,273	1,583	1,837	1,495	1,095	1,528	1,972
28.....	6,652	4,124	11,019	15,072	3,823	2,140	1,576	1,921	1,444	1,167	1,524	2,316
29.....	6,470	.....	11,756	14,715	3,826	2,115	1,576	2,115	1,356	1,146	1,524	2,418
30.....	6,470	.....	12,774	14,468	3,657	2,107	1,538	2,114	1,215	1,143	1,524	2,438
31.....	6,439	.....	13,812	.....	3,572	.....	1,481	1,832	.....	1,143	.....	2,479
Total.....	164,064	144,038	194,979	540,125	228,643	73,408	50,478	47,925	43,022	34,877	41,208	64,317
Mean.....	5,292	5,144	6,290	18,004	7,376	2,447	1,628	1,546	1,434	1,125	1,374	2,075
Highest....	7,142	6,500	13,813	20,196	14,141	3,580	2,156	2,115	1,722	1,210	2,448	2,542
Lowest.....	3,613	4,124	3,279	14,468	3,265	1,131	1,179	1,035	1,215	1,011	80	1,581

TABLE No. 4.

TOTAL flow of the Crow River for 1911.

Month.	Millions of Cubic Feet.	Remarks.
January.....	661.10	
February.....	342.59	
March.....	543.79	
April.....	4449.74	
May.....	3641.51	
June.....	2064.24	
July.....	1016.59	
August.....	629.82	
September.....	483.19	
October.....	405.02	
November.....	1362.36	
December.....	3236.46	
Total.....	18836.41	Millions of cubic feet.
Average rate of flow for the year.....	597.3	Cubic feet per second.

The above figures are from weir measurements.

TABLE No. 5.

TOTAL flow of the Crow River, and the Trent River at Healey Falls and Campbellford for 1912.

Month.	Crow River.	Healey Falls.	Campbellford.	Remarks.
	Millions of Cubic Feet.	Millions of Cubic Feet.	Millions of Cubic Feet.	
January.....	1832.92	10785.83	12618.75	
February.....	1386.88	5980.17	7367.05	
March.....	1068.36	5661.54	6729.90	
April.....	7018.20	22279.05	29297.25	
May.....	6551.84	27370.40	33922.24	
June.....	5231.72	27927.76	33159.48	
July.....	905.91	6010.53	6916.44	
August.....	680.62	4459.45	5140.07	
September.....	592.53	4041.79	4634.32	
October.....	947.66	5474.30	6421.96	
November.....	3072.29	12192.16	15264.45	
December.....	2903.19	15093.20	17996.39	
Totals.....	32192.12	147276.18	179468.30	Millions of cubic feet.
Average rate of flow for the year.....	1018.0	4657.3	5675.3	Cubic feet per second.

The above figures are from weir measurements.

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TABLE No. 6.

TOTAL flow of the Crow River and the Trent River at Healey Falls and Campbellford, for 1913.

Month.	Crow River.	Healey Falls.	Campbellford	Remarks.
	Millions of Cubic Feet.	Millions of Cubic Feet.	Millions of Cubic Feet.	
January.....	2458.47	11716.62	14175.09	
February.....	2097.92	10347.00	12444.92	
March.....	3708.77	13137.40	16846.17	
April.....	9089.11	37577.69	46666.80	
May.....	3063.04	16691.70	19754.74	
June.....	1105.12	5237.36	6342.48	
July.....	721.56	3639.76	4361.32	
August.....	447.42	3693.27	4140.69	
September.....	255.95	3461.15	3717.10	
October.....	111.33	2902.02	3013.35	
November.....	218.70	3341.64	3560.34	
December.....	757.56	4808.02	5565.58	
Totals.....	24034.95	116553.63	140588.58	Millions of cubic feet.
Average rate of flow for the year.....	762.1	3695.9	4458.0	Cubic feet per second.

The above figures are from weir measurements.

TRENT CANAL

PETERBOROUGH, May 26, 1914.

SIR,—I have the honour to submit the annual report on the maintenance and operation of the Trent canal for the year ending March 31, 1914.

The extent of waterway open to navigation is the same as last year, namely 160 miles.

OPENING AND CLOSING OF NAVIGATION.

Hastings to Rice lake, opened June 9, closed December 11.

Rice lake to Peterborough, opened May 3, closed December 18.

Peterborough to Lakefield, opened May 20, closed November 8.

Peterborough lift lock, opened May 20, closed November 8.

Lakefield to Bobcaygeon, opened April 26, closed November 29.

Bobcaygeon to Rosedale, opened May 25, closed November 29.

Balsam lake to lake Simcoe, opened May 1, closed October 20.

Kirkfield lift lock, opened May 1, closed October 20.

Lake Simcoe to Orillia, opened May 1, closed November 18.

The following work was performed on the several divisions of the canal during the year:—

HEALEY FALLS TO BOBCAYGEON.

REPAIRS.

Peterborough Lift Lock.—In order to drain the gate recesses in the upper reach, three-inch pipes were placed through the concrete centre wall between the upper bays 20—23½

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of the lock. These pipes were carried into the upper engine room and there connected with the waste pipes.

New rubber seal tubes were fitted to the gates of this lock.

The interior of the chambers was scraped and repainted with a graphite paint.

Bridges.—Bridges at the following points were replanked: Lock No. 7, Maria street, Peterborough, Warsaw road and Buckthorn.

Booms, Slides and Dams.—The dam at Lakefield was partially rebuilt and general repairs made to booms, slides and other dams.

Banks.—Slides which occurred in the slopes at the Peterborough lift lock were repaired. Other slips have since occurred which will be repaired and sodded during the coming season.

Four hundred and sixty-five feet of 24-inch cement pipe drain and one hundred feet of 8-inch drain, together with three concrete catchwater basins and manholes, were laid on the west side of the Peterborough lift lock to carry surface water to the canal below the lock.

Wharves.—The public wharf at the village of Keene was raised about two feet, filled and planked.

Shelters were provided on public wharves at Whitfields, Hales and Smithsons.

Minor repairs were made to public wharves at Gore's Landing, Harwood, Dunnetts, Hales and Smithsons.

Buoyming.—The channel in Pigeon creek from Pigeon lake to Omemee as well as the channel in Indian river from Rice lake to Keene was marked with spar buoys.

Painting.—Lockgates, lockhouses and fences were painted where deemed desirable. The interior of the lockhouse at lock No. 7 was renovated.

The highway bridge at Hastings was painted.

HEALEY FALLS TO BOBCAYGEON.

INCOME IMPROVEMENTS.

Repairs to Headwater Dams.—Otter Lake dam was rebuilt, the Forks dam was partially rebuilt and repairs were made to Burnt dam, all on Squaw river.

Riprapping.—The rubble wall facing the slope above the lock at Lakefield was rebuilt for a distance of about three hundred feet. Catchwater basins and tile drains were placed behind the wall, having weep drains at frequent intervals.

About four hundred feet of protection was placed on the water line of the east canal bank, south of the Grand Trunk Railway bridge at Nassau.

BOBCAYGEON TO BALSAM LAKE.

REPAIRS.

Bridges.—The highway bridge at Rosedale was repaired and replanked.

Booms, Slides and Dams.—In addition to general repairs, eight hundred feet of the superstructure of the wing dam at Bobcaygeon was rebuilt. A landing stage for small boats was built at Fenelon Falls.

Painting.—Lockgates and buildings at Lindsay, Fenelon Falls and Rosedale were painted, as well as the following bridges: Lindsay street, Lindsay; Wellington street, Lindsay; Fenelon Falls and Rosedale.

Repairs to Reservoir Dams.—General repairs were made to the following dams: Percy, Little Bob, Crab, Halls, and minor repairs to Norland, Elliott's and Devil's.

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INCOME IMPROVEMENTS.

Repairs to Headwater Dams.—Extensive repairs were made to dams at Big Bob, Oblong and Paint lakes, and minor repairs to the following dams: Hawk lake, Mud lake and Keneese lake. At Moore's Falls the south end of the dam was rebuilt in concrete and a canoe slide built to connect the upper and lower pools.

BOBCAYGEON TO BALSAM LAKE.

INCOME IMPROVEMENTS.

Dredging.—The channel of the Seugog river, north of the town of Lindsay, was widened and deepened to improve navigation to that town. About ten thousand cubic yards was removed by the dredge between the 12th of May and the 3rd September, when the dredging plant was moved to Balsover on the Balsam Lake-Lake Simcoe Division.

BALSAM LAKE TO LAKE SIMCOE.

REPAIRS. *

Locks.—Two new valves were placed in the upper gates of lock No. 1. Cement floors with tile drains leading therefrom were placed in the lockhouses at locks Nos. 2, 3 and 4. A tile drain was laid from the cellar of the lockhouse at lock No. 5.

Kirkfield Lift Lock.—One hundred and twenty feet of drain built in concrete was constructed in the tailrace from the power house.

Bridges.—The following bridges were replanked:—Portage road, Balsover, and Boundary road.

Wharves.—A small wharf was provided at Atherley on lake Simcoe.

Fences.—About eighty rods of fencing was moved back to permit of a ditch being dug on its former location and twenty rods of new fencing built.

Marking Channels.—Electric lights were installed at the swing bridge across the narrows between lakes Simcoe and Couchiching, and electric range lights to mark the channel between shoals at the narrows were placed on the lake shore about one mile north of the town of Orillia.

The channel on lake Couchiching from Mile island to Washago was marked with spar buoys.

A new buoy was placed at Couchiching point. This buoy carries a light at night.

BALSAM LAKE TO LAKE SIMCOE.

INCOME IMPROVEMENTS.

Dredging.—The prism of the canal through the rock cut at Balsover is being deepened to nine feet and the rock excavated is being used for riprap.

Riprapping.—About six thousand lineal feet of riprap procured from the dredging at Balsover was placed on the water line of the Talbot river from Balsover to lock No. 3.

Cleaning drowned lands.—The stumps and floating debris were removed from some submerged lands in Balsam lake and from there to the Kirkfield lift lock.

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GENERAL.

Minor repairs were made to all locks where necessary and to canal property generally, buoys and lighthouses were painted, fences repaired, ditches cleaned, etc.

The drilling plant was engaged in drilling and blasting rock in the Scugog river and at Balover from May 6 to October 15.

The dredging plant was let to the Public Works Department for work at Geneva Park, lake Couchiching, for about a week, in the month of October, and to Mr. Ed. Conroy to do work in connection with a Public Works Department contract at Orillia from October 27 to November 10.

Repairs due to ordinary wear and tear were made to the floating plant which consists of a dredge, drill boat, 3 tugs, 1 inspection steamer, 3 boarding scows, 4 dump scows and 7 flat scows. A steel derrick was placed upon flat scow No. 15.

The traffic as shown by the number of lockages at the principal locks shows an increase of 7 per cent over the previous year.

I am, sir, your obedient servant,

A. L. KILLALY,
Acting Superintendent.

W. A. BOWDEN, ESQ.,
Chief Engineer, Department of Railways and Canals,
Ottawa.

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WELLAND SHIP CANAL.

ST. CATHARINES, ONT., June 30, 1914.

SIR,—I beg to submit, herewith, my annual report on the progress of work on the Welland ship canal.

In my last annual report I gave an outline of the proposed route, dimensions and general engineering features of the canal, as follows:—

“The proposed Welland ship canal as finally located follows the course of the present canal from Port Colborne on lake Erie to Allanburg, half way across the peninsula. From this point an entirely new cutting is to be made, crossing the present canal just below lock No. 25, the water level of the two canals at this point being the same, viz: 568 feet above sea level. The new canal again crosses the present one below lock No. 11, the water of both canals at this point being at an elevation of 382 feet above sea level.

“The proposed canal enters lake Ontario at the mouth of the Ten Mile creek about three miles east Port Dalhousie, the entrance to the present canal. The total length of canal from lake to lake is 25 miles; and the difference in level between the two lakes, 325½ feet, is to be overcome by seven lift locks, each having a lift of 46½ feet. The dimensions of the locks are to be 800 feet in length by 80 feet in width in the clear and with 30 feet of water over the mitre sills at extreme low stages in the lakes. The width of the canal at the bottom will be 200 feet and for the present the canal reaches will be excavated to a depth of 25 feet only, but all structures will be sunk to the 30-foot depth, so that the canal can be deepened at any future date by the simple process of dredging out the reaches.

“A new western breakwater consisting of an immense rubble mound of stone from the excavation north of Port Colborne, and terminating in a timber and concrete headblock located some 2,000 feet farther out in the lake than the present breakwater, will be built to insure quiet water in Port Colborne harbour during storms, which is not the case now, the present breakwater not being far enough out in the lake to deaden the swells.

“The outer harbour at Port Colborne has now a 22-foot depth at ordinary stages of the lake, which is as much as is available at most of the lake ports and in the channels connecting the lakes at the present time, and the deepening of this portion of the harbour may be left for a few years until the connecting channels in the lakes allow deeper navigation.

“The inner harbour at Port Colborne will be deepened to the proposed new depth and the old locks and regulating weir now in the centre of the village will be entirely removed. The rock cut from Port Colborne to Humberstone will be deepened and widened on the west side, and just below Humberstone a thorough cut will be made across the point now forming Ramey's bend to materially straighten the canal. The materials from these cuts will be nearly all rock, and will be used to form the breakwater previously mentioned. A guard lock will be built in the rock cutting a short distance below Humberstone, and when this new cutting is ready for navigation a regulating weir will be built across the abandoned portion of the present canal which will be used as a by-pass to furnish water to the canal. This lock and regulating weir will control the elevation of the summit level of the canal, which it is proposed to keep at the level of extreme low water in lake Erie, viz: 568 feet above sea level.

“From Ramey's bend to Welland the canal will be deepened and widened by excavating a strip along the western bank. Instead of building a new aqueduct at

Welland to carry the canal over the Welland river, it is proposed to raise the level of the river to that of the summit level of the canal, viz: 568 feet, by means of a dam across the river at Port Robinson. This dam will be provided with a large overflow and regulating weir which will control the elevation of the summit level, allowing any surplus water to overflow into the old Welland river and pass out into the Niagara river at Chippawa as at present; a sufficient quantity of water will be allowed to run constantly to keep the river clean.

"The present aqueduct at Welland will be dredged out, also the bank between the canal and the river, which latter will be utilized between Welland and Port Robinson instead of the present canal, being somewhat straighter and entailing considerably less excavation. At Port Robinson a cut will be made through the present bank between the canal and the river through which vessels will again enter the canal prism.

"The raising of the Welland river above Welland will flood some 1,600 acres of low land adjoining the river bed. This land is flooded every spring by the flood water in the river, and is principally used for pasturage. The township of Wainfleet adjoining the Welland river on the south side, consists principally of low lying ground which drains into the Welland river, and to prevent damage to this land on account of the raising of the river, it will be necessary to open up most of the ditches from the point of their present entrance to the river to the intended high-water mark.

"The turning of the Welland river into the canal will pollute the water which is at present used by the towns of Welland, Thorold and Merriton, and by the city of St. Catharines, for domestic purposes. This may necessitate the construction of extensive filtering plants, which scheme is not looked upon with favour by those interested. An alternative scheme to lay a pipe line from lake Erie to the reservoirs of the different municipalities, through which clean water would be continuously pumped, is under consideration and appears to be the most feasible scheme available.

"Between Port Robinson and Allanburg what is known as the deep cut (deepest cutting 80 feet) will be deepened and widened by cutting a slice off the western bank. Allanburg is now the junction of the present and old Welland canals, and the water required for the latter which is quite considerable on account of the numerous power developments along it, is taken into the canal through a weir at this point.

"In connection with the construction of the ship canal, it is proposed to close the present old canal entirely between Allanburg and Marlatts bridge near Thorold, first building a new weir at the head of lock No. 25 of the present canal to supply the above-mentioned water. A dam will then be thrown across the old canal at Allanburg, and the old bed of the canal between the dam and Marlatts bridge will be utilized as a dumping ground in which to place the material removed from above water in widening the deep cut. This will form a very convenient dumping ground, and the old canal will become more self-contained, as at present the entrance works are situated at an inconvenient distance from the remainder of the canal.

"If it is desired to continue navigation on the old canal, entrance may be had to it through lock No. 25 of the present canal when the ship canal is completed, by making a short cut through the bank separating the two waterways.

"A pair of twin guard gates are located on the proposed canal near the southerly limits of the town of Thorold, and a short distance north of them is located lock No. 7, the head of this lock being directly opposite the head of lock No. 24 on the present canal. That portion of the present canal between locks No. 25 and No. 24, together with a pond of about 27 acres formed by flooding the upper valley of the Ten Mile creek, will be utilized as a regulating basin from which water to fill lock No. 7 will be drawn. This method of drawing water from a side pond instead of directly from the canal above avoids the formation of objectionable currents and surges in the canal and locks, and is the method adopted for filling all of the locks.

"Below lock No. 7 is a short reach of canal with an adjacent side pond or regulating basin having a surface area of about 84 acres, and immediately below are located

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Twin locks Nos. 6, 5 and 4, in flight. These three locks overcome a descent of 139½ feet. One flight will be used for downbound vessels and the adjoining flight for up-bound, a double flight being required to save long delays in the passage of vessels through the canal.

"The main line of the Grand Trunk railway between St. Catharines and Niagara Falls will cross over the foot of Twin locks No. 4, by means of two short bascule lift bridges.

"The Welland division line of the Grand Trunk railway is situated just where the new locks are to be built, and it will be necessary therefore to divert it some distance to the west, and the diverted line will bear the same relation to the proposed canal as the present line does to the present canal, following up on the west side of the locks, but remaining on the west side of the canal for some distance above the present lock No. 25, when it crosses over the proposed canal on a Bascule lift bridge to the east side.

"From lock No. 4 the proposed canal crosses the meadow to the north, following in part the bed of the Ten Mile creek till it crosses the present canal at the foot of lock No. 11, at an elevation of 382 feet above sea level, which is the level of the present canal at that point. This will enable small vessels which wish to do so, to use the Port Dalhousie entrance as at present, as far as lock No. 11.

"Lock No. 3 is located immediately north of the present canal, and at its head on the east side is situated an equalizing basin or pond of 150 acres. Below lock No. 3 a heavy cutting is required through the village of Homer to the bed of the Ten Mile creek again, above Carleton street, and just below Carleton Street Lock No. 2 is located. It was difficult to find a location for this lock on account of the lack of rock for a foundation, but eventually a suitable foundation was found at the present site. The canal at the head of lock No. 2 is at an elevation of 335½ feet above sea level, and floods about 200 acres of land in and adjoining the bed of the Ten Mile creek. Below lock No. 2 the canal follows the bed of the creek to the lake, lock No. 1 being situated just below the lake road. The pond at the head of lock No. 1 covers an area of 107 acres.

"The outer entrance piers in lake Ontario are placed about one and one-half miles from shore, where the depth of water is 30 feet. A wide channel will be dredged from these piers to lock No. 1. The sides of this channel will be protected near the shore end by reinforced concrete cribs with concrete superstructures, alongside which vessels may lie. From the shore line of the lake to the outer entrance piers an embankment about 500 feet in width will be formed on either side of the channel from material excavated from the canal between the lake and Thorold.

"For the purpose of conveying this material from the different contracts to the lake, the department will build a double track railway along the west side of the canal from the foot of the flight locks near Merriton to the lake, and temporary trestles will be built out in the lake on either side of the harbour from which to start the dumps. The railway will also be utilized to haul crushed stone from the site of the flight locks to locks Nos. 1, 2 and 3, where it will be used for the purpose of making concrete.

"The contractor for the rock excavation from the site of the flight locks will, under his contract, be obliged to crush a sufficient quantity of the good rock taken from his excavation to supply all the crushed stone required for making all the concrete for the different locks and structures.

"The lock walls will be 82 feet high above the top of the gate sills, and including the necessary foundation work required below this level two of the locks will have walls 100 feet high.

"The lock gates will be of the single leaf type, swinging on a hinge at one side of the lock, and resting in a notch cut in the opposite wall, a single leaf thus spanning the whole width of the lock chamber. The gate at the foot of each lock will be 83 feet in height and 88 feet in length, and will weigh about 1,100 tons.

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"The valves and culverts in the walls are of large dimensions and will permit of the lock being filled in less than eight minutes. This will mean that the time of passage through the canal will be very much reduced below that required at present.

"The canal will be divided into nine sections for contract and construction purposes.

"The contractor for each section will be required to supply all plant and labour to efficiently carry out the work of excavation and the construction of all structures such as locks, weirs, substructures of bridges, entrance piers, etc. He will also supply all necessary materials required in the construction of the above, excepting Portland cement and certain metal work which will be furnished by the department.

"The furnishing of Portland cement to contractors has been found a very satisfactory method on other contracts with the department and this method will be adopted in all contracts on the ship canal.

"All steel and iron castings and other metal work which is standard for all locks, etc., will also be furnished to the different contractors to be placed in position in the concrete masonry of locks, weirs, bridges, etc.

"The building and erection of lock gates will form a separate contract.

"The steel superstructure of bridges will be built under separate contracts.

"The following estimated quantities will give an idea of the magnitude of the work:—

Rock excavation..	6,000,000	cubic yards.
Earth " 	40,000,000	" "
Concrete " 	2,200,000	" "

"A careful and conservative estimate places the total cost of the work at less than \$50,000,000.

"The canal should be ready for navigation in five years."

In May, 1913, the department called in, as consulting engineer, Mr. Alfred Noble (since deceased), a very prominent engineer who has been connected with practically all the large canal undertakings in the United States for many years, to report upon the design and plans of the proposed canal, and upon receipt of Mr. Noble's report, which fully endorsed my plans and proposals, the department decided to call for tenders for several of the important sections of the work.

For construction purposes, the work was divided into nine contract sections, section No. 1 being at the lake Ontario end of the canal and section No. 9 at the lake Erie end, and during the fall of 1913 contracts were awarded for sections Nos. 1, 2, 3 and 5. Sections Nos. 1, 2 and 3 include the lake Ontario entrance and all of the seven lift locks; also the grading for the Welland Ship Canal construction railway. Contracts were also awarded for the necessary ties, rails, etc., for the construction railway.

Section No. 1 extends from station 0 to 150, approximately three miles, and covers about one and one-half miles of subaqueous work in lake Ontario, and about one and one-half miles of dry work on shore. This section embraces the construction of the lake Ontario harbour and entrance, single lock No. 1 and weirs, bridges Nos. 1 and 2; also the excavation of the canal proper, building of watertight embankments, roadway diversions, etc., and the grading of the construction railway alongside the section.

Section No. 2 extends from station 150 to station 380, approximately four and one-third miles, and embraces the construction of single locks Nos. 2 and 3, together with the necessary entrance walls, regulating and supply weirs, substructures for bridges Nos. 3, 4 and 5, construction railway swing bridge over present canal, and pond bridge at lock No. 3, the excavation of canal prism, building of water-tight embankments, roadway diversions, and the grading of the construction railway alongside the section.

Section No. 3 extends from station 380 to station 490, approximately two miles, and includes the construction of twin locks in flight Nos. 4, 5 and 6, single lock No.

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7, twin guard gates, and the necessary retaining and entrance walls, weirs, conduits, concrete bridges, steel bridge substructures, etc., and the relocation of the Welland division of the Grand Trunk railway from a point near the town of Merriton to the southern end of the section, between which points its present position interferes with the location of the ship canal; also the grading of the southern end of the construction railway. This section also includes the building of a large earth dam, opposite the head of lock No. 6, for the purpose of forming a pond to control the elevation of the canal at the head of the flight locks.

Section No. 4 extends from station 490 to station 640, approximately three miles, and embraces the excavation of the canal proper in a through cut of earth and rock between these points, together with the building of substructures of bridges Nos. 10, 11 and 12.

Section No. 5 extends from station 640 to station 775, approximately two and one-half miles, and the work consists of the excavation necessary to widen and deepen the present channel between Allanburg and Port Robinson, through what is known as the "Deep Cut." The excavated material, principally earth, is to be used in filling up the low land between the present canal and the old canal, north of Allanburg; also the filling of the old canal itself north from Allanburg to Marlatt's bridge. This section also embraces the building of the substructure for bridge No. 13, at Port Robinson.

Section No. 6 extends from station 775 to station 980, a distance of about four miles, and will include the building of a dam and weir across the Welland river near Port Robinson in order to raise the river to elevation 568 above sea level, which is assumed to be extreme low water level in lake Erie. It will also comprise the excavation necessary to form the canal prism on its new location in the Welland river between Port Robinson and Welland; the removal of a portion of the old aqueduct at Welland, and the construction of substructure for bridge No. 14 at Welland; also the diversion and raising of the present river road west of Welland where it will be flooded and such other work along the river banks as may be necessary to prevent the raising of the water level doing damage to adjoining property.

Section No. 7 extending from station 980 to 1210, approximately four and one-third miles, embraces the deepening and widening, on the west side, of the present canal between Welland and Lyon's creek, together with the substructures for bridges Nos. 15, 16, 17 and 18.

Section No. 8 extends from station 1210 to station 1310, approximately two miles, and consists of the excavation of a new cutting in earth and rock through the point formed by Raney's bend on the present canal, in order to straighten the channel for the use of large vessels. The excavation includes a large amount of rock work and in the rock cutting will be built a guard lock to take the place of the present locks at Port Colborne. When the new channel is open for navigation a regulating and supply weir will be built across the present channel and this, with the guard lock, will be utilized to maintain the level of the canal between this point and the guard lock at Thorold at elevation 568, which is assumed to be extreme low water in lake Erie.

Section No. 9, extending from station 1310 to deep water in lake Erie, embraces the excavation necessary to deepen and widen on the west side the present channel between Humberstone and Port Colborne, together with the removal of the present locks at Port Colborne. The excavated material will be used to build a spur on the western breakwater.

Section No. 1.

Tenders for section No. 1 were invited by public advertisement on June 2, 1913, and on August 1 a contract was entered into with the Dominion Dredging Company, Limited, of Ottawa, for the various works included within this section.

During the summer of 1913 a two-storey office building was erected immediately east of the canal prism and north of the Lake Shore road, to be used as engineering offices on the lower floor, and quarters for part of the staff on the upper floor.

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Mr. C. L. Hays, who had been acting as assistant engineer on the headquarters staff, and who had previously had considerable canal experience, was placed in charge of this section in September last as resident engineer.

The contractors arrived on the ground early in September last, and immediately commenced the construction of the necessary buildings and shops for their operations.

During the fall the ladder dredge *Brussels* and the dipper dredges *Delver*, *Dominion* and *Fundy* arrived on the work, but, owing to the lateness of the season, little real work was accomplished, and the dredges were laid up for the winter at Port Dalhousie about the middle of December.

The following plant for dry excavation has also been placed on the work and is in active operation:—

- 1—15 ton Brownhoist locomotive crane.
- 1—Model 85-C Bucyrus steam shovel.
- 1—Class 24 Bucyrus drag-line excavator.
- 1—No. 2 Marion-Osgoode steam shovel.
- 3—60 ton locomotives.
- 6—40 ton locomotives.
- 45—12 yard dump cars.
- 8—16 yard dump cars.
- 2—Western spreaders.

The Bucyrus shovel commenced work December 22 and worked until February 20, in the canal prism, west side, between stations 76 and 86. On February 20 it moved to the east side at station 88, where it has been engaged continuously to date, between stations 85 and 95, all of the excavated material going into fills for dykes on either side of the harbour.

The Bucyrus Drag-line excavator was assembled and commenced work on January 12, making a cut for the west entrance wall for lock No. 1, and has been continuously engaged at this since that date, having excavated 800 feet of this trench to grade, which is now ready for the construction of the entrance wall. Part of the material handled has gone into construction railway fill, and the balance into harbour dykes.

Shovel No. 2 commenced work on December 29 and has been engaged in excavating a drainage ditch through the flats from the Lake Shore road, southwards, and in the canal prism, west side, between stations 107 and 128, and is now working day and night, the excavated material going into construction railway fills.

The 15-ton locomotive crane, with clam-shell bucket, excavated a cutting for the construction railway, when not otherwise engaged, between stations 76 and 81-50, and is at present excavating drainage ditch along the east side of the watertight embankment above lock No. 1.

Dredging operations for this season were resumed on April 23, when the dipper dredges *Delver* and *Dominion* commenced work excavating the foundation for the cribs for docking on the east side of the harbour, the material being dumped on the line of the trestle, west side.

The dredge *Fundy* commenced work on May 4.

The contractors are at present building the trestles in the lake on the east and west sides of the entrance channel, which are to be used for the purpose of dumping excavated material from sections 1 and 2 to make side dykes or embankments forming the harbour, and which will eventually extend to deep-water a mile and a half out into the lake.

The contractors on this section have a splendid new plant of excavating machinery, locomotives and dump cars, and are making a very satisfactory showing.

Section No. 2.

Tenders for section No. 2 were invited on September 22, 1913, the successful tenderers being Messrs. Baldry, Yerburch and Hutchinson, of Westminster, England.

One of the buildings acquired in connection with the purchase of the right of way at Homer has been utilized for the purpose of engineering offices on this section, and on March 10 last Mr. E. G. Cameron, late of the engineering staff of the Trent canal, was placed in charge as resident engineer.

The contractors commenced operations early in December, 1913, erecting camps and other buildings, and at present have the following excavating equipment on the work.

- 1 90 ton "Marion" steam shovel, No. 1.
- 1 70-ton "Bucyrus" steam shovel, No. 2.
- 1 model C-85 "Bucyrus" steam shovel, No. 3.
- 1 Atlantic steam shovel, No. 4.
- 1 70-ton "Bucyrus" drag-line excavator, No. 1.
- 1 Model 24 "Bucyrus" drag-line excavator, No. 2.
- 9 40 to 60-ton locomotives.
- 7 18 to 45-ton locomotives.
- 60 12-yard dump cars.
- 6 30-yard dump cars.
- 12 16-yard dump cars.
- 55 6-yard dump cars.
- 1 Western spreader.
- 1 Jordon spreader.
- 6 Elevating graders.
- 3 Traction engines.

Steam shovel No. 1 commenced excavation on January 23, 1914, at station 151, east side of canal prism, material going into construction railway fills and west embankment. Work was stopped from February 6 until April 6, owing to frost. Since latter date this shovel has been engaged continuously excavating to grade between sections 151 and 170.

Steam shovel No. 2 started work on February 9th at station 306, canal prism, and has worked continuously since that date making cuttings between stations 306 and 336, all material going into construction railway fills north and south of the Queenston road.

Drag-line excavator No. 1 commenced work on March 5, excavating on section 1, but a great deal of time was lost owing to the frost and spring freshets. On March 21 this machine moved to section No. 2 at station 150, excavating east slope of prism to grade, to the site of lock No. 2.

Steam shovel No. 3 started on May 6, working south from station 280, canal prism, west side, and to date has made several cuts to station 292.

Drag-line excavator No. 2 was assembled and started work on April 23 in canal prism at station 294. It is trimming the east slope of the canal and excavating gravel for ballasting the construction railway.

Shovel No. 4 started in June excavating north along the canal prism, west slope, from station 368, the excavated material going into construction railway.

Drainage ditches have been excavated and culverts built along west side of canal to take care of drainage cut off by railway and canal banks.

Excellent progress is being made on this section.

Section No. 3.

Tenders for this section were invited on August 2, 1913, Messrs. O'Brien & Doheny and Quinlan & Robertson, of Montreal, being the successful tenderers, and a

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contract was entered into with this firm on October 4, 1913, for the various works comprised within this section.

As the location of the canal through the town of Thorold follows along Wellington and Chapel streets for a considerable distance, it was necessary to either demolish or remove a number of houses and other buildings situated on the right-of-way, and as the majority of these buildings were in fairly good condition it was decided to move some of them on to Government property, and utilize them for offices and quarters for members of the staff. Others have been moved to Welland street, sufficient land to accommodate them having been acquired by the department, and these will probably be disposed of by public sale in the near future.

An office building for the engineering staff was opened in November, one of the houses acquired in the purchase of the right-of-way through the town of Thorold being utilized for this purpose, and Mr. H. M. Belfour, formerly of the Trent canal, was placed in charge as resident engineer.

The contractors immediately commenced the erection of buildings and a large machine shop, and during the latter part of September their plant commenced to arrive on the work.

The contractors for this section have the following excavating plant on the ground:—

- 5 60-ton "Marion" steam shovels.
- 1 20-ton "Marion" steam shovel.
- 1 170-ton "Marion" drag line excavator, 115-foot boom.
- 1 140-ton "Beatty" drag line excavator, 100-foot boom.
- 2 40-ton standard locomotives.
- 16 12 to 30-ton locomotives.
- 12 12-yard dump cars.
- 150 6-yard dump cars.
- 20 4-yard dump cars.
- 2 traction engines (Sawyer-Massey).
- 1 Browning locomotive crane.

On October 3 the first steam shovel was placed in position and started excavating in cut for Grand Trunk railway relocation at station 86-50, railway chainage.

Steam shovel No. 2 commenced operations on October 9 at station 136-50, working north on G.T.R. relocation, material going into fill between station 136-50 and Thorold reservoir at station 140-00, also into west embankment of canal to elevation 482 as far south as Thorold reservoir. This shovel also made a cut for the relocation of the Colonial Wood Products Company's spur. Work was also commenced making a cut in the rock west of the Grand Trunk railway at station 443-00, canal chainage, for contractor's service track, which will cross under the G.T. Ry. at St. David's road, and thence to site of dam at head of lock 6, to be used for hauling excavated material to the dam for water-tight embankment.

Three other shovels were assembled and commenced work during the month of November, and at present the contractors have six steam shovels in operation on this section.

As the Grand Trunk railway double track main line to Niagara Falls crosses the proposed canal at the foot of twin locks No. 4, it was deemed advisable to make a slight diversion of this line to the north, and a steel double track railway bridge is being erected to carry the main line over the canal during construction. This bridge consists of four single track through truss spans and four single track girder spans, each of the tracks to be carried on a separate line of single track spans, so designed that when no longer required at the present location they can be used elsewhere as single track railway bridges. When twin locks No. 4 are completed Bascule lift bridges will be built to carry the railway over the locks on the old location.

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The contractors commenced excavation for centre pier of this bridge in January, 1914, and it is expected that it will be brought into service in September.

As the contractors for section No. 3 are required under their contract to supply and crush all rock to be used for concrete on sections 1, 2 and 3, they are installing an extensive rock crushing plant, north of Grand Trunk Railway main line. It is expected that this plant will be in operation in September.

The concrete corewall, for the large earth dam at the head of lock No. 6, which is founded on solid rock at depths from five to thirty feet below the base of the dam, is now nearly completed and good progress is being made on the building of the dam itself. The earth for the dam is being obtained from the excavation in the section which is rehandled into the dam by large clam shell excavator, and spread, rolled and watered.

The large amount of work required to relocate the Welland division of the Grand Trunk railway is now nearly completed and it is expected that the railway will be using its new line in October. Until the change is made the contractors are considerably hampered in their work as the present line runs diagonally across nearly the whole length of the section.

Section No. 5.

Tenders for this section were invited on October 29, 1913, the successful tenderers being the Canadian Dredging Company, Limited, Midland, Ont.

Five 60-ton "Marion" steam shovels are now at work on this section.

Section No. 4A.

This section consists of the construction of two reinforced concrete culverts across the flats between the present and the old canals, north of Allanburg, to take the place of the open ditches at present existing and which carry the drainage emanating on the east side of the present canal, and a supply weir near lock No. 25 of the present canal to feed the old Welland canal.

The supply weir is located in the rear of the bank between the old Welland canal and the raceway west of lock 25 of the present canal, and this and the culverts are necessitated by the fact that the old canal between Allanburg and Port Robinson will be closed and used in connection with the low land between the two canals as a dumping ground for material excavated from section No. 5.

The contract for this section was awarded to Messrs. Maguire & Cameron on April 17, 1914, and good progress is being made.

Construction Railway.

The Welland Ship Canal construction railway is being built by the department between the lower end of section No. 3, near Merritton, to Lake Ontario for the use of the contractors for sections Nos. 1, 2 and 3 in hauling excavated material from their sections to the lake, where it is deposited to form dykes or embankments on either side of the proposed harbour.

The railway will also be used by the contractors to haul stone from the crusher, located at the lower end of section 3, to their various works; also for the hauling of sand, cement, steel, etc.

Extending outward from the shore on either side of the new harbour on Lake Ontario, timber trestles are being built from which the first dumping of material for the side embankments takes place. As the trestles are filled up the dumping tracks are gradually moved sideways and the embankments widened. Eventually each side embankment will be three or four hundred feet in width and a mile and a half in length.

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The dredged material from the harbour is also being placed in these embankments.

The railway is now partially completed and the building of the embankments in the lake has been commenced and works very satisfactorily.

There was some doubt as to the effect of wave action on the unprotected faces of the embankments being built, but experience so far has shown that this will not be at all serious. Eventually the sides of the embankments will be rip-rapped with stone from the excavation.

At the crossing of the present canal, below lock No. 11, a double track steel swing bridge has been erected. The pile and concrete substructure was built by the contractors for section No. 2, and the steel superstructure by the Hamilton Bridge Works Company, Limited.

The grading for the railway has been done by the contractors for sections Nos. 1, 2 and 3 under their contracts, the ballasting by contractors for section No. 2 from a gravel pit in the canal prism.

Track materials were purchased by the department and track-laying done by day labour.

The railway is now being provided with an interlocking system, which will be operated by the department.

It is expected that trains will be run at five-minute intervals to accommodate the traffic next season.

GENERAL.

The Governor General visited the canal works on May 12. Unfortunately the day was cold and wet and the work was not seen to advantage by His Royal Highness.

Dr. J. McCoombe, who is in charge of the Medical Service for the contractors on sections 1, 2 and 3, has erected and equipped commodious hospital buildings on private property on the Queenston road, west of the canal prism, for the proper care and treatment of employees taken sick or injured on the canal operations. In addition, field hospitals are established at different points along the work.

The contract prices obtained for sections Nos. 1, 2, 3 and 5 have fully justified my estimate of cost of \$50,000,000 for the completed canal, and the work so far done justifies my estimate of date of opening of canal, namely, 1918.

I am, Sir,

Your obedient servant,

J. L. WELLER,
Engineer-in-charge.

W. A. BOWDEN, Esq.,
Chief Engineer,
Dept. of Railways and Canals,
Ottawa, Ont.

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WELLAND CANAL.

SUPERINTENDING ENGINEER'S OFFICE,
ST. CATHARINES, June 27, 1914.

SIR,—I have the honour to submit my report upon the maintenance and operation of the Welland canal and its branches for the fiscal year ended March 31, 1914.

NAVIGATION SEASON.

The canal opened for navigation on the 15th of April and closed 18th December, 1913.

ACCIDENTS.

A minor accident occurred on April 28. The steamer *Ames*, bound down, collided with the left hand gate of lock No. 5, breaking the hanging gear and carrying gate out of position. The damage was slight. Navigation was delayed sixteen hours on account of having to draw the water off the level above to bring in the gate lifter.

On June 15, 1913, the steamer *Lloyd S. Porter*, up bound, carried away the four gates of lock No. 1. On account of the large body of water released from both the old and new canals, repairs could not be commenced for about twelve hours. Four spare gates were placed and navigation resumed, having been interrupted for about thirty-six hours. The steamer was slightly damaged.

An unusual accident happened on August 2, 1913, when the steamer *Lehigh*, down bound, struck and carried away the lower gates of lock No. 23. They were replaced by spare ones and navigation resumed in eighteen hours. The vessel was damaged and leaking. She remained in the level between locks 22 and 23, clear of the navigable channel, until August 11, when temporary repairs were made to her and she passed out of the canal.

Another lesser accident, caused by the breaking of a hood, at lock No. 20, on August 30, 1913, made it necessary to put in a spare gate, delaying navigation for a few hours.

SLIDES.

The two slides which occurred on the summit level, in February, 1913, one on the west side about 1½ miles north of Welland aqueduct, and the other on the east side of the canal, at the south end of the deep cut, were removed by Mr. M. J. Hogan's dredging outfit sufficiently to provide safe navigation before the opening of the canal, in April, 1913. Later in the summer, the removal of the slide at Welland was completed.

IMPROVEMENTS.

A contract was entered into with Messrs. James Battle and N. W. Gowan, for the supply of steel castings forming the Gowan Lock Gate Safety Device. Enough castings were supplied to equip five additional locks. The masonry on locks Nos. 5, 7, 9, 10, 17, 18, 19, 20, 21, 22, 23, and 24 is prepared for the installation of the device. At the beginning of navigation for the season of 1914-15, the appliance had been equipped on the head gates at locks Nos. 5, 7, 9, 10, 17, 19, 21 and 24.

During the winter of 1913-14, while the canal was closed for navigation, the Grand Trunk Railway Company, at their own expense, replaced the single track railway swing bridge over the new canal between locks 5 and 6, with a similar one of stronger and more modern design and repaired the seat piers and abutments. The centre pier and cribs were not touched and the same clear width of channel on each side remains as before.

PORT COLBORNE ELEVATOR.

The Government elevator again showed a very large increase in business, receiving 21,441,826 bushels, as compared with 11,602,516 bushels the previous year. This amount exceeds by far any of the other Canadian lower lake port elevators, although some of these have a capacity five times greater than the Port Colborne elevator. I understand that there was but one lower lake port elevator, at Buffalo, which surpassed the Government elevator by a small margin.

The work on the erection of the addition to the elevator, giving a storage capacity of 2,000,000 bushels, was in progress during the year.

The receipts for handling grain paid all operating and repair expenses for the year and left a net surplus of \$53,047.06, an increase over the previous year of \$24,950.98.

REPAIRS—NEW CANAL.

Ordinary repairs to the structures on the new canal were carried out during the year. Lock No. 21 was unwatered in March, 1914, and the foundation of the upper recess, which had been undermined, repaired in concrete. Repairs in concrete were also made to part of the foundation of the lower recess. The foot-bridges over the weirs at locks Nos. 6, 7 and 24, and road bridges over locks Nos. 2, 19 and 21 weirs, which were badly decayed and unsafe, were renewed by reinforced concrete bridges. A two span bridge, carrying Geneva street over the by-pass near lock No. 6, which was in a very rotten and dangerous condition, was replaced by a reinforced concrete bridge.

REPAIRS—OLD CANAL.

The water was not drawn from the old canal in the spring of 1913, the foundation of the locks and weirs being considered to be in a safe condition.

The usual repairs to the weirs on the old canal were made during the year.

A reinforced concrete highway bridge was built over a creek a short distance below lock No. 5, to replace an old wooden structure, which was very badly decayed and unsafe for those using it.

Foot bridges over the weirs at locks Nos. 21, 22, 23, 24 and 25, which were in bad repair, were replaced by reinforced concrete bridges and are very satisfactory.

A large amount of sand, which had been washed by freshets down the Twelve Mile creek and old canal, was deposited at the head of and in the chamber of lock No. 2. During the summer it was removed by pumping and sold.

A reinforced concrete highway bridge was built over the hydraulic raceway at Clayburn avenue, the necessity having arisen from the growth of the city in this district.

WELLAND CANAL FEEDER.

The repairs of the damages caused by the flood on the Grand river early in March, 1913, were completed. A reinforced concrete spillway, to increase the facilities for the discharge of flood water from the upper to the lower river at Dunnville, was constructed during the summer, at the upper or westerly end of the Government island, and proved itself to be of great value in passing ice and water this spring. The freshet this spring, (1914), did practically no damage and was nothing in comparison with the 1912 and 1913 floods, when great damage was done, both to Government works and to the town of Dunnville.

A 30 inch concrete tile was built on Canal street east between Tamaraek and the syphon culvert, under the feeder at the foot of Niagara street, in the town of Dunnville, and the old ditch filled in.

A contract was entered into with Mr. R. H. Nelson, for the construction of a reinforced concrete syphon culvert under the Dunnville branch of the feeder at

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Broad creek, near Stromness, Ontario, and was satisfactorily completed. It supplements an old wooden culvert and did good work this spring in passing quickly the run-off from the surrounding country.

GENERAL.

The water in both lakes Erie and Ontario averaged about nine inches higher than in the previous year, dropping towards the end of the navigation season to about the same as the year before.

The following employees were superannuated:

Mr. Chas. H. Collier, on October 1, 1913.

Mr. John Collins, on October 1, 1913.

The following superannuated employees died during the year:—

Mr. James Ward, on April 7, 1913.

Mr. James Edmonds, on November 20, 1913.

Attached is a statement of moneys collected for damages to canal property by different vessels; also a statement showing the highest and lowest recorded depths of water on the mitre sills of the locks at Port Dalhousie and Port Colborne for each month of the year.

Respectfully submitted,

L. D. HARA,

Acting Superintending Engineer.

W. A. BOWDEN,

Chief Engineer,

Dept. Railways and Canals,
Ottawa, Ont.

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STATEMENT of damages to Welland Canal property during the Fiscal Year ending March 31, 1914, and amount paid on account of said damages.

Date of Damage.	Name of Vessel.	Amount of Damage.	Amount Paid.	Date Paid.	Where Paid.
1913.		\$ cts.	\$ cts.	1913.	
May 4	Steamer Saskatoon.....	23 20	23 20	July 18.....	Pt. Dalhousie.
" 5	" Mapleton.....	16 70	16 70	" 3.....	"
" 19	Brg. Ceylon.....	17 40	17 40	Aug. 20.....	"
" 22	Str. Keywest.....	15 20	15 20	June 26.....	"
" 27	" Turret Chief.....	24 99	24 99	" 26.....	"
" 29	" Natironeo.....	24 95	24 95	July 3.....	"
June 7	" Saskatoon.....	32 20	32 20	Oct. 15.....	"
" 23	" Stratheona.....	46 00	46 00	Sept. 10.....	"
" 15	" Lloyd S. Porter.....	4,808 32	4,808 32	June 17.....	"
July 12	Brg. Doreas Pendell.....	10 93	10 93	Oct. 15.....	"
" 18	" Derrick Seow and Tug Mystic...	61 41	61 41	July 27.....	"
" 24	Str. Ogdensburgh.....	16 45	16 45	Oct. 14.....	"
" 27	" Brandon.....	13 44	13 44	" 14.....	"
"	Seow No. 11, Great Lakes Dredg. Co.	60 35	60 35	" 15.....	"
Aug. 2	Str. Lehigh.....	4,683 31	4,683 31	Aug.	"
" 3	" Glenmavis.....	45 30	45 30	Sept. 10.....	"
" 14	" Iroquois.....	14 65	14 65	Oct. 15.....	"
" 19	" Calgary.....	55 50	55 50	" 15.....	"
" 20	" Jessie Spaulding.....	12 30	12 30	Nov. 5.....	"
Sept. 10	" Radiant.....	44 10	44 10	Dec. 4.....	"
" 14	" Turret Crown.....	17 40	17 40	Oct. 15.....	"
" 25	" Thyra Menier.....	97 70	97 70	Nov.	"
Oct. 9	" Imperoyal.....	12 61	12 61	Nov. 28.....	"
" 18	" Iocomo.....	13 90	13 90	Feb. 21-14..	"
Nov. 3	" Masaba.....	20 97	20 97	May 28-14..	"
Dec. 11	" Glenfoyle.....	49 29	49 29	May 28-14..	"

STATEMENT showing the highest and lowest depths of water on the lower mitre sill, Lock No. 1, New Welland Canal, Port Dalhousie, for the fiscal year ending March 31, 1914.

Months.	Lower Sill.		Months.	Lower Sill	
	Highest.	Lowest.		Highest.	Lowest.
1913.	Ft. In.	Ft. In.	1913.	Ft. In.	Ft. In.
April.....	17 9	17 0	October.....	16 7	16 1
May.....	18 0	17 8	November.....	16 3	16 0
June.....	18 1	17 10	December.....	16 1	15 10
July.....	18 0	17 8	1914.		
August.....	17 7	17 1	January.....	16 0	15 7
September.....	17 1	16 7	February.....	15 9	15 6
			March.....	16 0	15 7

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STATEMENT showing the highest and lowest depths of water on the upper mitre sill,
Lock 27, New Welland Canal, Port Colborne, for the fiscal year ending March
31, 1914.

Months.	Upper Sill.		Months.	Upper Sill.	
	Highest.	Lowest.		Highest.	Lowest.
1913.	Ft. In.	Ft. In.	1913.	Ft. In.	Ft. In.
April.....	16 9	15 5	October.....	17 5	14 1
May.....	16 5	15 10	November.....	17 4	14 0
June.....	16 5	15 10	December.....	15 11	13 7
July.....	16 7	15 4	1914.		
August.....	16 0	15 0	January.....	14 7	11 11
September.....	15 4	14 4	February.....	20 3	12 11
			March.....	13 10	12 7

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SAULT STE. MARIE CANAL.

SUPERINTENDING ENGINEER'S OFFICE,
SAULT STE. MARIE, ONT., March 31, 1914.

SIR,—I have the honour to report upon the maintenance and operation of the Sault Ste. Marie canal for the fiscal year ending March 31, 1914.

The canal was opened for traffic on April 13, and closed on December 14, having been in operation for 246 days.

The traffic passing Sault Ste. Marie, through the Canadian and United States canals, was the largest on record. The total freight tonnage amounted to 79,718,344 tons, an increase of 10 per cent; the passengers numbered 77,194, an increase of 15 per cent; and the registered tonnage of vessels amounted to 57,989,715 tons, an increase of 0.4 per cent.

The Canadian registered tonnage through both canals amounted to 4,326,245 tons, an increase of 632,641 tons, or 17 per cent.

The freight tonnage through the Canadian canal amounted to 42,703,641 tons, an increase of 8 per cent; the passengers numbered 36,853, a decrease of 2 per cent; and the registered tonnage amounted to 25,927,096 tons, an increase of 0.5 per cent.

There were only two accidents to vessels during the season, and none with serious results.

On July 6th, the steamer *G. A. Tomlinson*, after entering the lock, upbound, was forced back against the lower main gates by the premature opening of the upper valves. The stern of the vessel was damaged and the points of both gates slightly damaged.

On October 31st, while the steamer *Yorkton* was passing down, the railway bridge was closed too soon, striking the port bow of the vessel and doing some damage.

On November 6th, the upper north valve was put out of commission by the valve rod coming apart, and as the traffic was light the lock was operated during the balance of the season with one upper valve. When the lock was unwatered at the close of the season it was found that the key connecting the crank to the main shaft had come out.

During the season the new timber top on the lower north pier was completed.

A number of complaints were made by masters of vessels to the effect that they had grounded above the dock on the north side of the canal, while awaiting their turn. After the close of the season a "clam shell" was put to work and cleaned up a considerable amount of material from this location. The floats, used to keep vessels from rubbing against the wall, will be made wider; and several new floats were built during the past winter for this purpose.

During the laying up of the canal season, in addition to the cleaning out of the culverts, repairs were made to the lock floor, mitre sills and the division wall between the centre culverts.

The usual spring painting and repairs are in progress preliminary to the opening of navigation.

As the top of the timber portion of the lower south pier needs renewing, it is proposed to tear out the top of the old cribwork down below the water line and rebuild with concrete. About one hundred feet in length of this concrete top is under construction and will be completed before the opening of navigation.

By way of improving the canal grounds, a concrete roadway and sidewalks were constructed between the line of Huron street and the movable dam. The balance of this work from the movable dam to the west end of the grounds, and from Huron street eastward, remains to be built.

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A large lumber shed, 30 feet by 125 feet, was built at the east end of the grounds to hold the stock of lumber, etc.

The lookout station at Point Aux Pins and the patrol service were operated last season with very satisfactory results. Very few vessels came to the lock out of their turn, and the congestion of traffic which usually occurred twice a week was handled without difficulty.

I have the honour to be, sir,

Your obedient servant,

J. W. LE B. ROSS,

Superintending Engineer.

W. A. BOWDEN, Esq.,

Chief Engineer,

Department of Railways and Canals,

Ottawa, Canada.

COMPARATIVE Statement since opening of Lock, September 9, 1895.

	Season.	Increase or decrease over previous season.	Season.	Increase or decrease over previous season.	Season.	Increase or decrease over previous season.
	1895		1896		1897	
Period Open.....	{Sept. 9 Dec. 6		{May 7 Dec. 10		{April 21 Dec. 14	
Canadian Registered Ton- nage.....	125,240		586,571	461,331	398,343	-188,228
U. S. Registered Tonnage..	623,131		3,810,794	3,187,663	3,406,018	-404,776
Total Tonnage.....	748,371		4,397,365	3,648,994	3,804,361	-593,004
Lockages.....	698		3,042	2,344	2,976	-66
Vessel Passages.....	1,193		5,189	3,996	4,376	-813
Time Passing Lock.....	212 h. 27 m.		984 h. 22 m.	771 h. 55 m.	684 h. 11 m.	-300h. 11m
Average Time Lockage....	18-26 m.		18-42 m.		13-79 m.	
	1898		1899		1900	
Period Open.....	{April 11 Dec. 9		{April 26 Dec. 20		{April 23 Dec. 16	
Canadian Registered Ton- nage.....	403,331	4,988	561,759	158,428	579,528	17,769
U. S. Registered Tonnage..	2,354,606	-1,051,412	2,388,441	33,835	1,616,139	-772,302
Total Tonnage.....	2,757,937	-1,046,424	2,950,200	192,263	2,195,667	-754,533
Lockages.....	2,520	-456	2,610	90	2,205	-405
Vessel Passages.....	3,712	-664	3,820	108	3,163	-657
Time Passing Lock.....	609 h. 30 m.	-74 h. 41 m.	643 h. 16 m.	33 h. 46 m.	541 h. 24 m.	-101h. 52m.
Average Time Lockage....	14-51 m.		14-78 m.		14-73 m.	
	1901		1902		1903	
Period Open.....	{April 20 Dec. 21		{April 1 Dec. 20		{April 2 Dec. 13	
Canadian Registered Ton- nage.....	776,331	196,803	1,366,087	589,756	1,616,385	250,298
U. S. Registered Tonnage..	1,672,631	56,492	3,238,069	1,565,438	3,145,020	-93,049
Total Tonnage.....	2,448,962	253,295	4,604,156	2,155,194	4,761,405	157,249
Lockages.....	2,906	701	3,418	512	3,242	-176
Vessel Passages.....	4,243	1,080	5,169	926	4,418	-751
Time passing Lock.....	724 h. 38 m.	183 h. 14 m.	925 h. 57 m.	201 h. 19 m.	883 h. 10 m.	-42h. 47m.
Average Time Lockage....	14-96 m.		16-25 m.		16-34 m.	

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COMPARATIVE Statement since opening of Lock, September 9, 1895.—*Concluded.*

	Season.	Increase or decrease over previous season.	Season.	Increase or decrease over previous season.	Season.	Increase or decrease over previous season.
	1904		1905		1906	
Period Open.....	{April 30 Dec. 26		{April 10 Dec. 20		{April 14 Dec. 22	
Canadian Registered Ton- nage.....	1,557,335	-59,050	1,799,336	242,001	1,959,186	159,850
U. S. Registered Tonnage..	2,673,090	-471,930	3,739,224	1,066,134	4,399,990	660,766
Total Tonnage.....	4,230,425	-530,980	5,538,560	1,308,135	6,359,176	820,616
Lockages.....	3,012	-230	4,031	1,019	4,152	121
Vessel Passages.....	4,092	-326	5,853	1,761	5,913	60
Time Passing Lock.....	811 h. 28 m.	-71 h. 42 m.	1060 h. 10 m.	249 h. 10 m.	1131 h. 23 m.	70 h. 24 m.
Average Time Lockage.....	16-16 m.		15-79 m.		16-35 m.	
	1907		1908		1909	
Period Open.....	{April 22 Dec. 15		{April 21 Dec. 15		{April 21 Dec. 16	
Canadian Registered Ton- nage.....	2,288,349	329,163	2,556,552	268,203	2,912,586	356,034
U. S. Registered Tonnage..	9,961,977	5,561,987	7,038,389	-2,923,588	14,899,562	7,861,173
Total Tonnage.....	12,250,326	5,891,150	9,594,941	-2,655,385	17,812,148	8,217,207
Lockages.....	4,596	440	3,667	-929	5,406	1,379
Vessel Passages.....	6,153	240	5,344	-809	6,420	1,076
Time Passing Lock.....	1362 h. 8 m.	230 h. 45 m.	1258 h. 35 m.	-103h. 23m.	1853 h. 45 m.	595 h. 10 m.
Average Time Lockage.....	17-78 m.		20-59 m.		17-31 h.	
	1910		1911		1912	
Period Open.....	{April 12 Dec. 15		{April 22 Dec. 13		{April 24 Dec. 19	
Canadian Registered Ton- nage.....	3,122,068	209,482	3,089,863	-32,205	3,273,614	183,751
U. S. Registered Tonnage..	20,227,083	5,327,521	16,242,103	-3,984,980	22,516,040	6,273,937
Total Tonnage.....	23,349,151	5,537,003	19,331,966	-4,017,185	25,789,654	6,457,688
Lockages.....	6,110	1,064	5,229	-881	6,200	971
Vessel Passages.....	8,285	1,865	6,802	-1,483	7,866	1,064
Time passing Lock.....	2327 h. 40 m.	473 h. 55 m.	1704 h. 25 m.	-623 h. 15m	1811 h. 45 m.	107 h. 20 m.
Average Time Lockage.....	22-86 m.		19-55 m.		17-53 m.	
	1913					
Period Open.....	{April 13 Dec. 14					
Canadian Registered Ton- nage.....	3,746,369	472,755				
U. S. Registered Tonnage..	22,180,727	-335,313				
Total Tonnage.....	25,927,096	137,442				
Lockages.....	6,266	66				
Vessel Passages.....	8,197	331				
Time Passing Lock.....	2145 h. 50 m.	334 h. 05 m.				
Average Time Lockage.....	20-54 m.					

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REPORT of Traffic passing Sault Ste. Marie through Canadian and American Canals.

Year.	Number of vessels passed.	Registered tonnage of vessels.	Total freight tonnage.	Cost of carrying per mile tons.	Estimated value of freight carried.	Percentage of freight carried in Canadian vessels.	Number of passengers.
				Mills.	\$	%	
1855.....	193	106,296	14,503				8,295
1860.....	916	403,657	153,721				9,230
1865.....	997	409,062	181,638				19,777
1870.....	1,828	690,826	539,883				17,153
1875.....	2,023	1,259,534	833,465				19,685
1880.....	3,503	1,734,890	1,321,906				25,766
1885.....	5,380	3,035,987	3,256,628				36,147
1890.....	10,557	8,454,435	9,041,213	1-3	102,214,948	3-5	24,856
1891.....	10,191	8,400,685	8,886,759	1-35	128,178,208	4-0	26,190
1892.....	12,580	10,647,203	11,214,333	1-31	135,117,267	3-8	25,896
1893.....	12,008	8,949,754	10,796,572	1-1	145,436,957	4-1	18,869
1894.....	14,491	13,110,366	13,195,860	-99	143,114,502	3-5	27,236
1895.....	17,956	16,806,781	15,062,580	1-14	159,575,129	3-75	31,656
1896.....	18,615	17,249,418	16,239,061	-99	195,146,842	3	37,066
1897.....	17,171	17,619,923	18,982,755	-83	218,235,927	3	40,213
1898.....	17,761	18,622,764	21,234,634	-79	233,069,740	2-2	43,426
1899.....	20,255	21,958,347	25,255,810	1-05	281,364,750	3-1	49,082
1900.....	19,452	22,315,834	25,643,073	1-18	267,011,959	3	58,555
1901.....	20,041	24,626,976	28,403,065	-99	289,906,865	4	59,663
1902.....	26,659	31,955,582	35,961,146	-89	358,306,300	4	59,377
1903.....	18,596	27,736,444	34,674,437	-92	349,405,014	6	55,175
1904.....	16,120	24,364,138	31,546,106	-81	334,502,686	6	37,695
1905.....	21,679	36,617,699	44,270,680	-85	416,965,484	5	54,204
1906.....	22,155	41,098,324	51,751,080	-84	537,463,454	5	63,033
1907.....	20,437	44,087,974	58,217,214	-80	569,830,188	5	62,758
1908.....	15,181	31,091,730	41,390,557	-69	470,141,318	7	53,287
1909.....	19,204	46,751,717	57,895,149	-78	626,104,173	6	59,948
1910.....	20,899	49,856,123	62,363,218	-74	654,110,844	6	66,933
1911.....	18,673	41,653,488	53,477,216	-67	595,019,844	6	79,951
1912.....	22,778	56,736,807	72,472,676	-67	791,167,591	6	66,877
1913.....	23,795	57,989,715	79,718,344	-68	865,957,838	6	77,194

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CAR FERRY TERMINALS.

CAPE TORMENTINE, N.B.—CARLETON PT., P.E.I.

CAPE TORMENTINE, N.B., July 6, 1914.

SIR,—I have the honour to submit my annual report on the construction of the car ferry terminals on the straits of Northumberland, at Carleton Point, P.E.I., and at Cape Tormentine, N.B.

Terminal at Cape Tormentine:—

A contract was entered into with Mr. A. T. Mackie, April 20, 1913, which includes the construction of a timber pier approach to the ferry landing, extending out from the present pier 727 feet on the sea side and 235 feet on the harbour side providing a berth for the ferry at the landing stage; the construction of a rubble mound breakwater 700 feet in length, which encloses and provides a protection for a turning basin for the ferry, and the dredging out of the turning basin, and the approach thereto from deep water to a depth of 20 feet at L.W.O.S.T.

The principal items of work done are the dredging of 1,600 cubic yards of material in the turning basin; the building of 500 feet of cribwork within the present breakwater to provide the required space in the approach to the landing, and the delivery of a large quantity of materials required for the construction.

The contractor's quarry, where the stone to be used in the construction of the breakwater and other parts of the work is being procured, is situated in Saekville, 38 miles from the works and connected therewith by the New Brunswick and Prince Edward Island railway.

Carleton Point Terminal:—

A contract was entered into with Roger Miller and Sons on September 2, 1913, which includes the construction of a rubble mound approach extending 1,600 feet from the shore, followed by 637 feet of pier on the sea side and 220 feet on the harbour side, which provides a protected berth for the ferry boat at the landing stage; the construction of a rubble mound breakwater 700 feet in length, which encloses and provides a protection for a turning basin for the ferry, and the dredging out of a turning basin and the approach thereto from deep water to a depth of 20 feet L.W.O.S.T.

The first work undertaken was the securing of a quarry from which to provide the large quantity of stone which is the principal item in this contract. The Scoudae river quarry, situated $3\frac{1}{2}$ miles from Point du Chene, was selected and work was immediately started in stripping the overburden of earth, installing the necessary plant, and reconstructing the spur line connecting with the Intercolonial railway used in the transportation of the stone to the pier at Point du Chene, where the unloading plant has been erected to transfer the stone from the cars to the scows and barges used in transportation to the works at Carleton point. The distance of haul from Point du Chene to Carleton point is 40 miles, for which the contractor has provided himself with an adequate floating plant that will assure the delivery of the stone.

Carleton Branch Line Railway:—

The construction of the branch line of railway connecting the Cape Traverse branch of the Prince Edward Island railway was started on December 1, 1913. The right of way has been cleared and 4,840 cubic yards of material removed.

I have the honour to be, sir,

Your obedient servant,

F. B. FRIPP,
Engineer-in-charge.

W. A. BOWLES, Esq., C.E.,

Chief Engineer, Dept. Railways and Canals,
Ottawa.

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HUDSON BAY RAILWAY.

OFFICE OF THE CHIEF ENGINEER,

WINNIPEG, June 24, 1914.

DEAR SIR,—I have the honour to submit my annual report for the fiscal year ending March 31, 1914, on the progress of the work on the Hudson Bay Railway.

CLEARING AND GRADING.

The right-of-way has been cleared up to the first crossing of the Nelson river at mile No. 242; grading has been completed up to mile No. 130, and there are only a few short muskeg fills to make, to complete same up to mile No. 150. Beyond this point there are 50 cuts now being worked (19 on the first and 31 on the second contract) the latter having been opened this month.

There are considerable stretches of muskeg still to be graded on the first contract between mile No. 150 and No. 185, which cannot be started until the frost comes out in June. On the second contract the character of the country changes and a large proportion of the rock work on same can be proceeded with this winter.

Contractors are now putting in supplies for the active prosecution of the work up to mile No. 242 during the coming season, and they have also established caches up to Landing river, mile No. 280, which will all be stocked with supplies by the end of April.

TRACK-LAYING.

Track-laying was resumed last month and steel has now been laid up to mile No. 102. Two hundred thousand ties have been received at Le Pas since last month, and this work will now be pushed forward.

BALLASTING

The track has been surfaced up to mile No. 56, from pits at Le Pas, mile No. 22 and mile No. 30, but these pits are now exhausted and contractors are at work clearing the right-of-way for track into Reader's lake, near mile No. 7, where there is an unlimited supply of first-class ballast.

There is a large deposit of coarse sand alongside the main line at Mile No. 110 which will be used for the first lift and I also expect to be able to get material around mile No. 72.

BRIDGES AND TRESTLES.

The bridge over the Saskatchewan river at Le Pas was completed early in the year. Trestles have been erected at mile No. 100 and No. 101, and the one over the Woody river at mile No. 116 is now being erected.

The revised bridge survey for the first crossing of the Nelson river at Manitou rapids has been completed and the narrowest crossing of the river (300 feet) has been got by raising the grade line and increasing the curvature of the approaches, and at the same time reducing the yardage in the rock cuts on both sides of the river.

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SURVEYS.

Several revisions have been made this winter at various points on the line, with the result that curvature has been cut out and quantities decreased.

A location party are now at work revising the line between Kettle Rapids and Port Nelson. I have also had the river examined between Kettle Rapids and Port Nelson, with a view to getting a more favourable crossing than at Kettle Rapids, but reports received have been unfavourable, and ice conditions very bad; however, I hope to improve this crossing by taking advantage of two small islands, which will mean cutting down the span by about 200 feet.

GENERAL.

Since taking charge of this work in November last, I have to report good progress for the winter months, which are fairly rigorous in this part of the country.

I have made a few changes in the staff, by which I hope to have a better working organization, and have also gone over all the line where work will be carried on during the coming season, and impressed the contractors with the absolute necessity of crowding on the men when the frost goes out, about the first of June, so that the maximum amount of work can be accomplished during the short season which we have, from June to October.

Your obedient servant,

J. W. PORTER,

Acting Chief Engineer.

W. A. BOWDEN, Esq.,
Chief Engineer,
Dept. Railways and Canals,
Ottawa, Ont.

HUDSON BAY RAILWAY TERMINALS,
PORT NELSON, May 1, 1914.

W. A. BOWDEN, Esq.,
Chief Engineer,
Department of Railways and Canals,
Ottawa.

DEAR SIR,—I have the honour to present the following report upon the works of the Hudson Bay Railway terminus at Port Nelson during the fiscal year ending March 31, 1914.

During the early part of the year, my predecessor, Mr. H. T. Hazen, who had a small party at Port Nelson during the fall and winter of 1912-13, left for Ottawa to make arrangements for the ensuing season's work. There then remained at Port Nelson an engineering party and fifteen workmen, the latter being reduced on the opening of navigation to nine men.

The spring break-up came unusually early. The small creeks broke out of their solid frozen beds on April 15th, and flooded the harbour ice. The May following was relatively colder and the channel opposite Root creek did not break up until May 26, after which open water extended gradually upstream, large cakes breaking and going out with each tide. The shore ice, which remains grounded upon the beach for a width of one to two hundred feet, was sufficiently melted so that a gasoline launch was placed in the water during the third week of June.

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The work accomplished previous to the arrival of the first ship on August 6 consisted in the placing of a half dozen barrel buoys in the channel entering the harbour; the construction, with round logs, of an engineer's office; the partial clearing of the area between King street and the river, and between Indian and Root creeks; and the construction of the temporary wharf for landing supplies which was under way at the time of the arrival of the first ship.

Halifax was chosen as the port from which all supplies for Port Nelson were to be shipped, and early in June large quantities were assembled for shipment at the Intercolonial wharves and sheds at Richmond. The ships which were chartered for the carrying of goods to Port Nelson were the sealers *Bonaventure* and *Bellaventure*, and the tramps *Alcazar*, *Alette*, *Cearense* and *Sindbad*. The department also shared with the Department of Naval Service the ss. *Beothic*, an ice-breaking sealer. For use at Port Nelson the department purchased the motor schooner *Neophyte* and the tug *Kathleen*, and sent these to Port Nelson in the tow of the *Bonaventure* and *Bellaventure*. These latter two ships, with their tows, left Sydney, where they coaled, on the 8th July and kept in close touch with one another until the 22nd, when the *Bonaventure*, making no further progress on account of ice, and her tow, handed over the *Neophyte* to the *Bellaventure* and proceeded unhampered towards Port Nelson, where she arrived on August 6, having had many further delays due to ice. The *Bellaventure* after a few days delay in the position left was able to avoid the ice adopting a circuitous northerly route and arrived safely at Port Nelson with the *Neophyte* and *Kathleen* on August 11. The *Alcazar* arrived at Port Nelson on August 18 and showed on her bow plates the effects of the ice which she encountered. The following table shows the time of passage of the various ships from Sydney or Halifax to Port Nelson:—

Ship.	Time of leaving Halifax or Sydney.	Arrived at Pt. Nelson.	Ice conditions.
<i>Bonaventure</i> , 1st trip.....	July 8	Aug. 6	Held by ice until Aug. 4.
<i>Bellaventure</i> , 1st trip.....	July 8	Aug. 11	Held by ice until Aug. 8.
<i>Alcazar</i>		Aug. 18	Held by ice in Hudson Bay.
<i>Sindbad</i>	Aug. 19	Sept. 5	Met ice only in Hudson Straits
<i>Beothic</i>	Aug. 30	Sept. 8	Met practically no ice.
<i>Cearense</i>	Aug. 31	Sept. 13	Met no ice.
<i>Alette</i>	Aug. 27	Sept. 14	Met no ice.
<i>Bellaventure</i> , 2nd trip.....	Sept. 7	Sept. 28	Towed Dredge to Pt. Nelson.
<i>Bonaventure</i> , 2nd trip.....	Sept. 17	Sept. 29	Met with no ice.

I understand no ice was met with by the *Alcazar*, which left Port Nelson on the 20th September, or by the *Beothic* which left on the 29th September, but the *Sindbad*, which left on the 30th September, met ice off Mansfield Island, and being of frail construction and short of coal, her captain deemed it wise to return to Port Nelson, and she arrived back on October 8. On the 13th she again left under convoy of the *Bellaventure* and *Bonaventure*, and made the passage safely through the small quantity of ice met with in the vicinity of Mansfield Island.

The *Alette* left Port Nelson on the 7th. She met with ice in the neighbourhood of Mansfield Island, and having punctured the plates of her fore peak, she returned to Port Nelson. She entered the harbour just after all floating craft had been placed in winter quarters, and without anchoring the ship or stopping her, the men on board beached her on the north side of the channel, four and a half miles from Root Creek. The naval service ss. *Acadia* was outside the harbour and came in just behind the *Alette*, anchored close by and took off the crew with boats and sailed on the 19th, making the passage through the Bay and Straits successfully.

Earlier in the season the ss. *Ucareuse*, after lying close by the naval service ship *Acadia* outside the harbour all one night, attempted to make the entrance early next morning, September 13, but from some undetermined cause she went out of her course and grounded on the south side of the channel, fourteen and a half miles from Root Creek. She was abandoned by her crew who were returned to Nova Scotia by the ss. *Boothie*.

During the period August 6 to October 13, which could be more properly reduced to the period August 11, the arrival of the *Neophyte*, to October 11, the date on which lightering ceased, all energies were directed towards landing cargo and preparing for the winter. Before this could be done workmen's tents and cookeries had to be put up, the wharf had to be completed, derricks erected, swamps drained, railway tracks laid, foundations excavated, warehouses built, rolling stock landed, supplies protected from fire, rain, frost, and theft, all of which operations were interdependent and each obstructed by the non-completion of the other. These and many other things unnecessary to recall prevented us from landing all the cargo which was desirable, and as a result a large quantity of dimensioned timber was returned to Halifax, and some was lost through the burning of the forward part of the ss. *Alette*, which broke out from some unknown causes, fourteen days after being beached. The fire raged fiercely for about a week, at the end of which the ice conditions enabled us to reach her from the shore and flood the ship by dynamiting her sides, thereby saving one-half the cargo.

The dredge *Port Nelson* was towed successfully from Toronto to Port Nelson and landed on the beach at Root creek. On the beach she sustained a slight injury, which we believe will not effect her usefulness in any way.

The *Neophyte*, *Kathleen*, gasoline boats, and other small craft were gotten out of the river by October 16, and none too soon, as the drifting ice became so thick in a few days that had they been afloat they would have been carried away.

On shore the buildings were erected as quickly as possible in order to house the workmen and protect supplies. The middle of September found us with one warehouse, a meat house, and one bunk house completed, and the end of October found three bunk houses, one dining camp, a retail store and office, two warehouses, a meat house and a root house completed. The hospital was completed on December 22, and at that time there was in use about two miles of narrow gauge track.

The Marconi station was begun as soon as the floating plant was placed in winter quarters and the supplies were all safe in warehouses, root houses, etc. On account of having to excavate all foundations in frozen clay, and lay concrete in November and December with the thermometer registering twenty below zero on many days, and erect the two hundred and fifty-foot steel masts in such a windy cold winter, it was not until February 20 that we were able to fully operate the station.

Work was begun in November on the stern wheel tug and the hull was finished about the last of February. The construction of a timber deck scow was begun on the 13th March under a large house tent and is progressing favourably.

During the latter part of February a gang of fifty men were moved over the Nelson river opposite Flamborough Head to procure native timber for temporary structures. As there are no horses here and as the dogs will be engaged in hauling provisions, the hauling of the logs has to be done with small bob sleighs hauled by the men themselves. Good progress is being made and over ten thousand pieces will be landed before the end of the season.

Very early in the winter it was realized that coal was short and in order to have sufficient for the coming spring's work with the dinky engine and the tug *Kathleen*, it was decided to burn wood, and thus a large amount of time and money was spent hauling wood for fuel from the sparsely wooded creeks and ridges near the camps.

In January the department began the construction of a tote road to Port Nelson for the purpose of bringing in the labour required during the summer of 1914. This

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was not carried through to Port Nelson, but with the assistance of dog teams, hauled by the men themselves, the journey was made by the one hundred and fifty men with ease and without injury other than a few cases of temporary snow blindness. All these men arrived at Port Nelson a few days subsequent to the end of the fiscal year, and their presence will enable the work to progress much more rapidly than would otherwise have been possible during the coming summer.

Early in November a survey party was organized and sent up to Nelson river for the purpose of ascertaining its navigation possibilities for the first sixty miles. It was not possible, on account of ice conditions, to accomplish all that was desired, but much valuable information has been obtained.

Further sounding is being done in the harbour, but reliable work is not easily done on account of the great depth of the ice and the uncertain action of the water beneath the rough grounded ice. The Nelson river and harbour remained open until about the new year, when it became possible to cross on the ice below Seal islands. The channel gradually closed up and by the middle of January the ice was continuous across the channel opposite Root creek. The open water gradually receded until the end of March, when it was probably about eighteen miles distant from Root creek. From information derived from Mr. Hall, of the Hudson Bay Company, the ice in Hudson bay is continuous and solid for a distance of fifty miles off the Tatnam coast and is tremendously rough, with rafted points fifty feet above what would be water level. The character of the harbour ice varies greatly from year to year. November and December are the months when the ice conditions will be hard on the structures, as during all this period sheets of solid ice, two or three inches thick, move back and forth in continuous procession, with a maximum velocity of about one and three quarter knots. On the incoming tide the sheets meet the narrowing shores and set up a continuous cracking roar as the sheets raft, crack and crush to powder. When this year the harbour finally became solid from shore to shore, it consisted of a belt of rough, rafted, partly grounded ice, on edge, extending from the north beach half way to the deep channel, and from the south beach to about the edge of the deep channel. Between these lines, from Hart's creek to nine miles below Root creek, the ice in 1914, as well as 1913, was relatively smooth and has grown in thickness until it is about five feet thick. Beyond this smooth belt, toward the bay, the ice is almost impassibly rough and consists of great slabs four feet thick thrown up and rafted in all shapes and forms. In this kind of ice lies the *Cearense*. The ice towers above her decks on all sides and is heaved in upon her forward deck. On account of ice the tidal fluctuation during the month of March this year varied from two to four feet, whereas in summer it varies from a minimum of eight to a maximum of seventeen feet.

The health of the community at Port Nelson for the past year has been excellent, and the climate, though cold, is healthy.

The following table shows the average temperature for each month taken from morning and evening readings, 1913: January—42.0, February—24.6, March—15.1, April 22.5, May 29.3, June 43.9, July 53.0, August 51.7, September 37.6, October 21.2, November 8.3, December—5.7; 1914, January—23.9, February—28.5, March—7.7.

The wind blows a very large percentage of the time; the prevailing direction being from the northwest. The maximum velocity for one hour shows upon the gauge, which has been operating for the past four months, was forty miles per hour. The barometric fluctuations are not great, and as a weather indicator it is not as sensitive as in some other parts of Canada.

The land at Port Nelson and the adjacent country consists of swamps with scattered and stunted tamarack, and areas of clay at slightly higher elevation with a sparse growth of stunted spruce.

The whole ground surface is covered with a thick mat of moss, under which in the swamps is soft clay for a depth of four to six feet, overlying a great depth of hard

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pan. Beneath the moss, in the spruce covered areas, the ground if undisturbed, remains frozen throughout the summer. During the past season the prospecting of the country for construction materials has been carefully done, and materials of great value in the creation of harbour works have been located, though they do not lie as close to Port Nelson as would be desirable.

The number of men engaged upon the works has varied from time to time. During the winter there were about one hundred and eighty men on the pay-roll, which number includes all members of the staff. In addition to the above there were seven men attached to the Marconi wireless station, three white women, wives of employees, three men attached to the Royal Northwest Mounted Police, and an Indian community of about eleven men with their wives and children.

Mr. L. E. Silcox, of the Hudson Bay railway engineering staff, and a survey party were in the vicinity for a period of about three months and were supplied from Port Nelson as base.

A monthly transportation service by dog team between Le Pas and Port Nelson was operated throughout the winter in order that pay-roll and mail should not be long delayed. With the wireless station in successful operation since February 20, the necessity for a mail is not very much felt.

In concluding this report I wish to point out that the peculiar isolation of the work and the climate of the country has called upon the organization here to perform many functions and tasks not required in more accessible places, and it has caused much human effort to be lost or to be diverted from actual construction work.

Respectfully submitted,

D. W. McLACHLAN,
Engineer-in-charge.

DARTMOUTH BRANCH LINE,
DARTMOUTH, N.S., April 22, 1914.

W. A. BOWDEN, Esq.,

Chief Engineer, Dept. of Railways and Canals,
Ottawa, Ont.

DEAR SIR,—I have the honour to submit the following report on the progress of the construction of the Dartmouth to Deans branch of the Intercolonial Railway of Canada, during the fiscal year ended March 31, 1914.

The contract with Messrs. M. P. and J. T. Davis expired on March 31, 1914. The work comprised in the contract was not completed on that date, and an extension of time was granted to December 31, 1914. Considerable difficulty has been experienced by the contractors in securing labourers, and the method generally employed in regard to grading east of Cole Harbour, is to excavate the line cuttings by hand labour, and where the excavation quantities so obtained do not complete the embankments, to supply the balance from borrow pits by steam shovel and train. This makes the completion of the grading dependent upon the speed at which track can be laid, and steam shovels pushed forward from the Dartmouth end. Between Cole Harbour (mile 10), and Seaforth (mile 18), some comparatively large cuttings were not finished in advance, and were finally taken out by steam shovel, and this section was not sufficiently graded to permit track-laying until February, 1914, consequently delaying the completion of all unfinished embankments east of Seaforth.

Two steam shovels with light locomotive engines and cars were employed until October, 1913, and one steam shovel and equipment, during the winter.

On the work in advance of steam shovel operations, average forces of 42 foremen, 28 mechanics and 417 labourers were employed from April to October, 1913; 27 foremen, 23 mechanics and 229 labourers in November and December, 1913; and 19 foremen, 9 mechanics and 150 labourers from January to March, 1914.

From Dartmouth to Musquodoboit Harbour (mile 0 to mile 33) the grading is well advanced; there remains to be done some small gaps in embankment, and filling in and about openings left for such bridges and culverts as are not built, and the final trimming, ditching, etc. of cuttings. From Musquodoboit Harbour, to a point near Little river (mile 33 to mile 48) the cuttings are finished with the exception of final trimming, etc., as above, but considerable quantities of embankment are still unfinished, particularly between Musquodoboit Harbour and Crawford's Falls (mile 33 to mile 40). From Little river to the end of the line, there are unfinished line cuttings in which about 30,000 cubic yards remain to be excavated. This is insufficient to complete the embankments, and an additional quantity of borrow or train hauled material will be required.

Concrete work on bridge abutments and culverts which was closed down in November, 1912, was not resumed until July, 1913, so that a part of the most favourable season for this class of work was not taken advantage of, consequently the progress for the season was not equal to that anticipated.

Pile trestles have been erected at Cole Harbour, Lawrencetown, Porter's Lake and Chezzetcook. As a protection against seaworms and to insure durability these trestles are built of creosoted piling with southern hard pine stringers and decking.

Wire fencing with cedar posts was erected from Dartmouth to west side Cole Harbour, and from east side Cole Harbour to Lawrencetown.

The greater part of the ties required, both for main line and switch ties have been provided and delivered on the right of way, and the balance are within hauling distance.

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Tracklaying was carried on from the Dartmouth end from time to time as the grading progressed, reaching the head of Chezzeteook (mile 26½) at the end of fiscal year.

In regard to ballasting, small deposits of gravel were found at Cole harbour and Porter's lake, and distributed under track in some of the wetter cuttings, but regular operations of ballasting were not commenced during the fiscal year. The country about the line was examined for suitable material, and deposits of gravel of sufficient quantity were located at Musquodoboit harbour (mile 33) and at Middle Musquodoboit (mile 54). That at Musquodoboit harbour is of fair quality, and the quantity required between that point and Dartmouth will probably be obtained there, as no deposit of sufficient size has been found nearer Dartmouth. Test pits at Middle Musquodoboit indicate a large quantity of good ballast, which will furnish the supply for the Musquodoboit Valley section.

The total expenditure to end of fiscal year is \$1,236,519.16, equal to 64½ per cent of the estimated total expenditure, and the percentages of the various items, compared with the estimate to complete are:

Location.	100 per cent.
Engineering expenses.	79 "
Right of way and legal expenses.	26 "
Grading.	93 "
Bridges, trestles and culverts.	40 "
Ties.	95 "
Rails and fastenings.	36 "
Ballast.	02½ "
Tracklaying.	33 "
Fencing right of way.	20 "

"Engineering," "Grading," and "Rails and Fastenings" will probably at the completion of the work somewhat exceed the amounts estimated by reason of the additional length of time required to finish the work, the appearance of more loose and solid rock than was expected in cuttings in upper part of Musquodoboit valley, and the substitution of 80 pound for 60 pound rails on part of the line and the increase in prices of same from \$27 to \$28 per ton.

The items of work remaining to be done, likely to occupy the most time are train filling and ballasting, for which some additional plant has been provided and more expected, promising a fairly vigorous prosecution of the work.

I am, sir, your obedient servant,

W. A. HENDRY,
Engineer-in-charge.

PART VII.

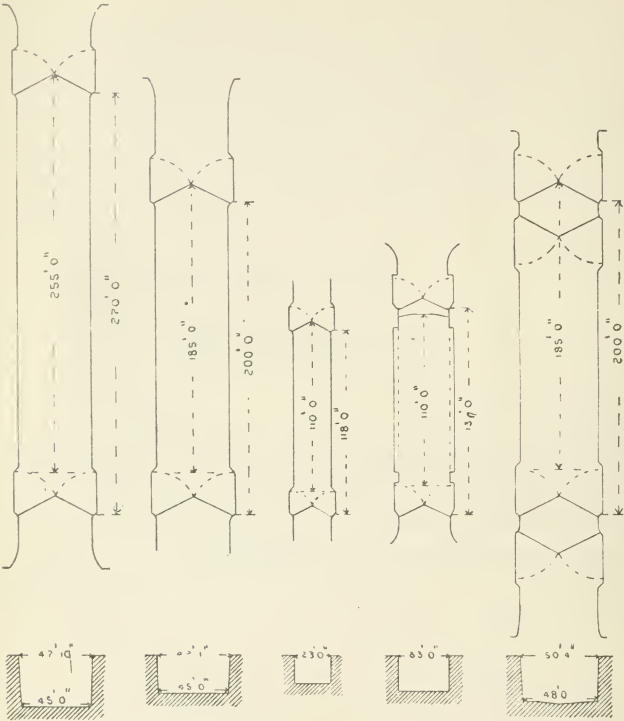
CANALS

Diagrams showing dimensions of smallest lock on each canal, etc.

Dimensions and other features of the several canal works, and description of the intermediate water navigations:

1. Between Montreal and Port Arthur or Fort William, Lake Superior.
2. Montreal, Ottawa and Kingston.
3. River Richelieu and Chambly Canal to Lake Champlain.
4. Trent Canal.
5. St. Peter's Canal.

Plans and Sections showing Dimensions of the Smallest Lock on each



Lachine

St Anne,
St Ours,
Carillon,
& Grenville.

Chambly

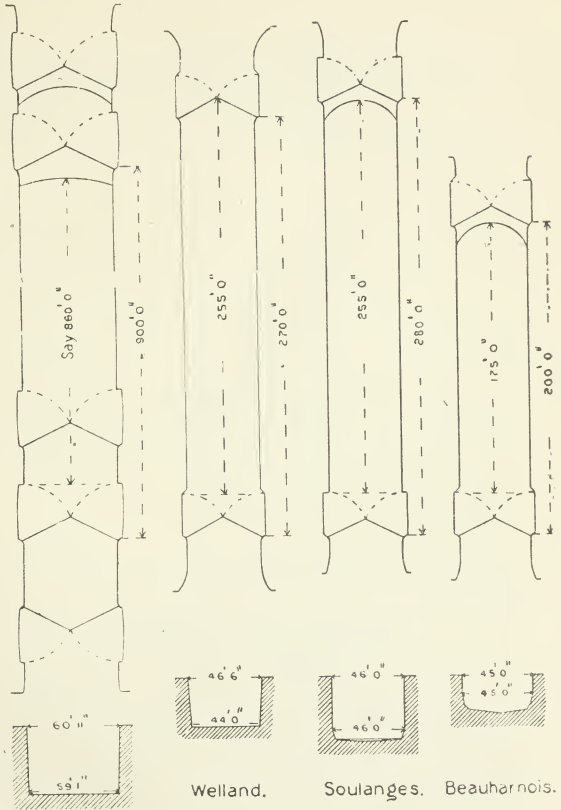
Rideau

St Peter's

There are no locks on the through route between Lake Superior and

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of the Canadian Canal System except the Trent Canal, which is uncompleted.

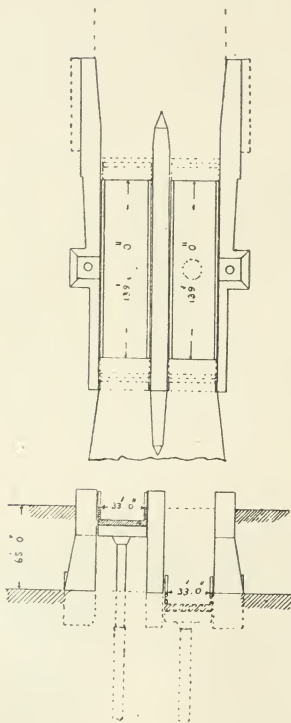


Sault Ste Marie.

Montreal of less dimension than those of the Welland Canal Locks.

TRENT CANAL

Hydraulic Lift-Lock at Peterborough
65 Feet Lift.



CANALS.

The following statements give in concise form the essential features of the government canal works and the intermediate water navigation.

The canal systems of the Dominion, under government control, in connection with lakes and navigable rivers are as follows:—

First.—The through route between Montreal and Port Arthur or Fort William on the west shore of Lake Superior (14 feet minimum depth of water.)

	Statute Miles.
1. Lachine canal.	8½
Lake St. Louis and River St. Lawrence.	16
2. Soulanges canal.	14
Lake St. Francis and River St. Lawrence.	31
3. Cornwall canal.	11½
River St. Lawrence.	5
4. Farrans Point canal.	1½
River St. Lawrence.	9½
5. Rapide Plat canal.	3¾
River St. Lawrence.	4½
6. Galops canal.	7½
River St. Lawrence and Lake Ontario.	228
7. Welland canal.	26¾
Lake Erie, Detroit river, Lake St. Clair, Lake Huron, etc.	574
8. Sault Ste. Marie canal.	1½
Lake Superior to Port Arthur or to Fort William. . . .	272
Total.	1,214
To Duluth.	1,336
Chicago.	1,240

Second.—Montreal to International Boundary, near Lake Champlain.

	Statute Miles.
1. St. Lawrence river to Sorel.	46
2. Sorel, via Richelieu river, to St. Ours lock.	14
3. St. Ours lock.	½
4. Richelieu river, St. Ours lock, to Chambly canal. . . .	32
5. Chambly canal.	12
6. Chambly canal to boundary line.	23
Total.	127½

Third.—Montreal to Ottawa.

	Statute Miles.
1. Lachine canal.	8½
Lake St. Louis.	15
2. St. Anne's lock at outlet of Ottawa river.	½
Lake of Two Mountains and Ottawa river.	27
3. Carillon canal.	¾
Ottawa river.	6½
4. Grenville canal.	5¾
Ottawa river to Ottawa.	56
Total.	119¾

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Fourth.—Ottawa to Kingston and Perth.

	Statute Miles.
1. Rideau canal, Ottawa to Kingston.	126½
Perth Branch.—Rideau lake to Perth.	7
Total.	133½

Fifth.—Lake Ontario, at Trenton, to Lake Huron.

1. Trent canal,—not completed.

Sixth.—Atlantic Ocean to Bras d'Or Lakes, Cape Breton.

	Statute Miles.
1. St. Peter's canal.	½

RIVER ST. LAWRENCE AND LAKES.

The River St. Lawrence, with the system of canals established on its course above Montreal, and the Lakes Ontario, Erie, St. Clair, Huron and Superior, with connecting canals, afford a course of water communication extending from the Strait of Belle Isle to Port Arthur or Fort William on the west coast of Lake Superior, a distance of 2,217 statute miles. The distance to Duluth is 2,339 miles; the distance to Chicago, 2,243 miles. From the Strait of Belle Isle, at the mouth of the St. Lawrence, to Montreal, the distance is 1,003 statute miles. From Quebec to Montreal the distance is 160 miles.

The control of the St. Lawrence ship channel, and the making of improvements thereto, are now under the Department of Marine and Fisheries, whose annual reports give full information as to the history and improvement of the channel. A 30-foot channel between Montreal and Father Point—with a width of 450 feet in the straight portions, and of from 600 to 750 feet in the bends between Montreal and Quebec, and of 1,000 feet everywhere below Quebec—has been practically completed. In 1909 the first work of deepening the ship channel to 35 feet was begun.

By means of channel improvements, Montreal has been placed at the head of ocean navigation, and here the canal systems of the River St. Lawrence begin, overcoming the several rapids by which the river channel upwards is obstructed, and giving access through the St. Lawrence canals, the Welland canal, the Great Lakes and the Sault Ste. Marie canal to the head of Lake Superior.

The difference in level between the point on the St. Lawrence, near Three Rivers, where tidal influence ceases, and Lake Superior, is about 600 feet.

The Dominion canals, constructed between Montreal and Lake Superior, are the Lachine, Soulanges, Cornwall, Farrans Point, Rapide Plat, Galops, Murray, Welland and Sault Ste. Marie. Their aggregate length is 74 miles; total lockage (or height directly overcome by locks), 553½ feet. The number of locks through which a vessel would pass in its passage from Montreal, at the head of ocean navigation, to the head of Lake Superior, is 48. The Soulanges canal takes the place of the Beauharnois canal, abandoned for navigation purposes, and the Murray canal is used only by the coasting vessels on Lake Ontario. It is not a part of the through route.

It is important to note that the enlargement of canals on the main route between Montreal and Lake Erie comprises locks of the following minimum dimensions: length, 270 feet; width, 45 feet; depth of water on sills, 14 feet. The length of vessels to be accommodated is limited to 255 feet. At Farrans Point, in the canal of that name, the lock is 800 feet long. A similar lock is built at Iroquois, on the Galops canal, the object being to pass a full tow at one lockage. The lock at Sault Ste. Marie is 900 feet by 60 feet, with 18 feet 3 inches on the sills at lowest known water level.

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Access from Lake Erie to Lake Huron is obtained by way of the Detroit river, Lake St. Clair, and the St. Clair river, which have been deepened to a minimum of 21 feet, principally by the United States government.

Communication between Lakes Huron and Superior is obtained by means of the Canadian Sault Ste. Marie canal, and also by the St. Mary's Falls canals, situated on the United States side of the River St. Mary. Improvements of the United States channels in River St. Mary through Hay lake, east of Sault Ste. Marie, have been carried on for several years past. The dredged areas now total 34 miles in length, with a minimum width of 300 feet, which is increased at angles and other critical points to 1,000 feet. The depth is 20 feet at the mean stage of water. In the year 1903 excavation was commenced to afford 21 feet at the lowest stage of water.

The improvement of Canadian channels from above Montreal to the head of Lake Superior is controlled by the Department of Public Works. Work is now under way to dredge the channel in the River St. Mary to 21.5 feet below L.W.L., the existing minimum depth being 18.75 feet below L.W.L. Existing depths elsewhere between Lakes Erie and Superior give a minimum of 21 feet below L.W.L. The Limekiln channel in the Detroit river has been deepened to 21 feet; and the United States government has opened the Livingstone channel in the same (Detroit river) with a depth of 22 feet.

The improvements at the harbours of Fort William and Port Arthur now under way will give a minimum depth of 25 feet below L.W.L. This depth exists at present over the channels leading to the principal wharves.

The provisions and maintenance of aids to navigation on all Canadian river and lake channels is controlled by the Department of Marine and Fisheries.

The Sault Ste. Marie, Welland, Cornwall, Soulanges and Lachine canals are well lighted throughout by electricity, and are electrically operated. The Farrans Point canal is lighted with acetylene gas.

Navigation, which is closed by ice during the winter months, opens about the end of April on the Great Lakes and St. Lawrence route. Ice-breaking steamers are now employed to lengthen the navigable season at Lake Superior and Georgian Bay terminals.

STATEMENT OF PRESENT MINIMUM DEPTH OF IMPROVED CHANNELS.

Father Point to Montreal.	30 feet.
Montreal to Port Colborne.	14 "
Port Colborne to Fort William.	18½ "

LACHINE CANAL.

Length of canal.	8½ statute miles.
Number of locks.	5
Dimensions of locks.	270 feet by 45 feet.
Total rise or lockage	45 feet.
Depth of water on sills, at two locks.	18 "
Depth of water on sills, at three locks.	14 "
Average width of new canal.	150 "

The old lift locks, 200 feet by 45 feet, are still available, with 9 feet of water on mitre sills. The two lower north locks, however, have been lengthened to 270 feet, and have 16½ feet of water on the sills.

The canal consists of one channel, with two distinct systems of locks, the old and the enlarged. There are two lock entrances at each end.

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The canal extends from the city of Montreal to the town of Lachine, overcoming the St. Louis rapids, the first of the series of rapids which bar the ascent of the River St. Lawrence. They are 986 miles distant from the Strait of Belle Isle.

SOULANGES CANAL.

Length of canal...	14 statute miles.
Number of locks—	
Lift...	4
Guard...	1
Dimensions of locks...	280 feet by 45 feet.
Total rise or lockage...	84 feet.
Depth of water on sills...	15 "
Breadth of canal at bottom...	100 "
Breadth of canal at water surface...	164 "

The canal extends from Cascade Point to Coteau Landing, overcoming the Cascades rapids, Cedar rapids and Coteau rapids.

From the head of the Lachine to the foot of the Soulanges canal the distance is sixteen miles.

CORNWALL CANAL.

Length of canal...	11 statute miles.
Number of locks...	6
Guard gates...	1
Dimensions of locks...	270 feet by 45 feet.
Total rise or lockage...	48 feet.
Depth of water on sills...	14 "
Breadth of canal at bottom...	90 "
Breadth of canal at water surface...	154 "

The old lift locks, 200 feet by 55 feet, are also available with nine feet of water on mitre sills.

From the head of the Soulanges to the foot of the Cornwall canal there is a stretch through Lake St. Francis 31 miles, which is navigable for vessels drawing fourteen feet.

The Cornwall canal extends past the Long Sault rapids from the town of Cornwall to Dickinson's Landing.

WILLIAMSBURG CANALS.

The Farrans Point, Rapide Plat and Galops canals are collectively known as the Williamsburg canals.

FARRANS POINT CANAL.

Length of canal...	1½ mile.
Number of locks...	1
New lock...	800 feet by 50 feet.
Old lock...	200 " 45 "
Total rise or lockage...	3½ feet.
Depth of water on sills of new lock...	14 "
Depth of water on sills of old lock...	9 "
Breadth of canal at bottom...	90 "
Breadth of canal at water surface...	154 "

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From the head of the Cornwall canal to the foot of Farrans Point canal the distance on the River St. Lawrence is five miles. The latter canal enables vessels ascending the river to avoid Farrans Point rapids, passing the full tow at one lockage. Descending vessels run the rapids with ease and safety.

RAPIDE PLAT CANAL.

Length of canal.	3 $\frac{3}{4}$ miles.
Number of locks.	2
Dimensions of locks.	270 feet by 45 feet.
Total rise or lockage.	11 $\frac{1}{2}$ feet.
Depth of water on sills.	14 "
Breadth of canal at bottom.	80 "
Breadth of canal at water surface.	152 "

The old lift-lock, 200 feet by 45, is also available with nine feet of water on mitre sills.

From the head of Farrans Point canal to the foot of Rapide Plat canal there is a navigable stretch of 9 $\frac{1}{2}$ miles. The canal was formed to enable vessels ascending the river to pass the rapids at that place. Descending vessels run the rapids safely.

GALOPS CANAL.

Length of canal.	7 $\frac{1}{2}$ miles.
Number of locks.	3
Dimensions of locks—	
Lift-lock at foot of canal.	800 by 50 feet.
Guard-lock at head of canal.	270 by 45 "
Lift-lock to pass vessels around Galops rapids only.	303 by 45 "
Total rise or lockage.	15 $\frac{1}{2}$ feet.
Depth of water on sills.	14 "
Breadth of canal at bottom.	80 "
Breadth of canal at surface of water.	144 "

From the head of Rapide Plat canal to Iroquois, at the foot of the Galops canal the St. Lawrence is navigable 4 $\frac{1}{2}$ miles. The canal enables vessels to overcome the rapids at Pointe aux Iroquois, Point Cardinal and the Galops.

MURRAY CANAL.

Length between eastern and western piers.	5 $\frac{1}{2}$ miles.
Breadth at bottom.	80 feet.
Breadth at water surface, low water, Lake Ontario.	124 "
Depth below low water, Lake Ontario.	11 "
Number of locks.	None.

This canal extends through the Isthmus of Murray, giving connection westward between the head waters of the Bay of Quinté and Lake Ontario, and thus enabling vessels to avoid the open lake navigation.

WELLAND CANAL.

Main line from Port Dalhousie, Lake Ontario, to Port Colborne, Lake Erie.

	Old line.	Enlarged or new line.
Length of canal.	27½ miles.	26¾ miles.
Pairs of guard-gates (formerly 3).	2	1
Number of locks—		
Guard.	1	1
Lift.	26	25
Dimensions.	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> $\left\{ \begin{array}{l} 1 \text{ (tidal) } 230 \times 45 \\ 1 \text{ lock } 200 \times 45 \\ 1 \text{ lock } 270 \times 45 \\ 24 \text{ locks } 150 \times 26\frac{1}{2} \end{array} \right\}$ </div> <div>270 feet x 45 feet.</div> </div>	
Total rise or lockage.	326¾ feet.	326¾ feet.
Depth of water on sills.	10½ "	14 "

WELLAND RIVER BRANCHES.

Length of canal—

Port Robinson Cut to River Welland.	2,622 feet.
From the canal at Welland to the river, via lock at Aqueduct.	300 "
Chippewa Cut, to River Niagara (6-ft. navigation only).	1,020 "
Number of locks—one at Aqueduct and one at Port Robinson.	2
Dimensions of locks.	150 x 26½ feet.
Total lockage from the canal at Welland down to River Welland.	10 feet.
Depth of water on sills.	9 feet 10 inches.

GRAND RIVER FEEDER.

Length of canal.	21 miles.
Number of locks.	2
Dimensions of locks.	1 of 150 by 26½ ft.
	1 of 300 by $\left\{ \begin{array}{l} 45 \text{ ft. lower.} \\ 28 \text{ ft. upper.} \end{array} \right.$
Total rise or lockage.	10 feet.
Depth of water on sills.	6 " only.
Navigable depth of channel.	9 "

PORT MAITLAND BRANCH.

Length of canal.	1¾ miles.
Number of locks.	1
Dimensions of locks.	185 feet by 45 feet.
Depth of water on sills.	7½ feet.
Total rise or lockage.	7 "
Navigable depth of channel.	6 " only.

The Welland canal has two entrances from Lake Ontario at Port Dalhousie, one for the old, the other for the new canal.

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From Port Dalhousie to Allanburg, $11\frac{3}{4}$ miles, there are two distinct lines of canal in operation, the old line and the enlarged or new line.

From Allanburg to Port Colborne, a distance of 15 miles, there is only one channel, the old canal having been enlarged.

From the head of the Welland canal there is a deep water navigation through lake Erie, the Detroit river, lake St. Clair, the St. Clair river, lake Huron and river St. Mary to the Sault canal, a distance of about 580 miles. From the Sault the distance through lake Superior to Port Arthur is 274 miles, and to Duluth 397 miles.

SAULT STE. MARIE CANAL.

Length of canal, between the extreme ends of the entrance piers.	$11\frac{3}{4}$ miles or 7,472 feet.
Number of locks.	1
Dimension of locks.	900 feet by 60 feet at water level; width at lock bottom, 59 feet.
Depth of water on sills (at lowest known water level).	18 feet 3 inches.
Total rise or lockage (mean).	19 feet.
Breadth of canal at bottom.	141 feet 8 inches.
Breadth at surface of water.	150 feet.

This canal has been constructed through St. Mary's island, on the north side of the rapids of the river St. Mary, and, with that river, gives communication on Canadian territory between lakes Huron and Superior.

MONTREAL, OTTAWA AND KINGSTON.

This route extends from the harbour of Montreal to the port of Kingston, passing through the Lachine canal, the navigation section of the lower river Ottawa, and the Ottawa canals, to the city of Ottawa; thence by the river Rideau and the Rideau canal to Kingston, on lake Ontario—a total distance of $245\frac{3}{4}$ miles.

After leaving the Lachine canal the works constructed to overcome difficulties of navigation are:—

OTTAWA RIVER CANALS.

The Ste. Anne's lock. Carillon canal. Grenville canal.

RIDEAU CANAL.

The total lockage (not including that of the Lachine canal) is 509 feet (345 rise, 164 fall) and the number of locks is 55.

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The following table exhibits the intermediate distances from Montreal harbour:—

Sections of Navigation.	Intermediate Distance.	Total Distance from Montreal.
	Miles.	Miles.
The Lachine canal.	8 $\frac{1}{2}$	
From Lachine to Ste. Anne's lock	15	23 $\frac{1}{2}$
Ste. Anne's lock and piers.	$\frac{1}{8}$	23 $\frac{5}{8}$
Ste. Anne's lock to Carillon canal.	27	50 $\frac{5}{8}$
The Carillon canal.	$\frac{3}{4}$	51 $\frac{3}{8}$
From Carillon to Grenville canal.	6 $\frac{3}{4}$	57 $\frac{3}{8}$
The Grenville canal.	5 $\frac{1}{4}$	62 $\frac{3}{8}$
From the Grenville canal to entrance of Rideau navigation.	56	119 $\frac{3}{8}$
Rideau navigation ending at Kingston.	126 $\frac{1}{4}$	245 $\frac{3}{8}$
" Perth branch, from Rideau lake to Perth.	7	195

STE. ANNE'S LOCK.

	New Lock.	Old Lock.
Length of canal.	$\frac{1}{8}$ mile.	$\frac{1}{8}$ mile.
Number of locks.	1	1
Dimensions of locks.	200 x 45 feet.	190 x 45 feet.
Total rise or lockage	3 "	3 "
Depth on sills.	9 "	6 "

This work, with guide piers above and below, surmounts the Ste. Anne's rapids between Ile Perrot and the head of the island of Montreal, at the outlet of that portion of the river Ottawa which forms the lake of Two Mountains, 23 $\frac{1}{2}$ miles from Montreal harbour.

THE CARILLON CANAL.

Length of canal.	$\frac{3}{4}$ mile.
Number of locks.	2
Dimensions of locks.	200 x 45 feet
Total rise or lockage.	16 feet.
Depth of water on sills.	9 "
Breadth of canal at bottom.	100 "
Breadth of canal at water surface.	110 "

This canal overcomes the Carillon rapids.

From Ste. Anne's lock to the foot of the Carillon canal is a navigable stretch of 27 miles, through the lake of Two Mountains and river Ottawa.

By the construction of the Carillon dam across the river Ottawa the water at that point is raised 9 feet, enabling the river above to be used for navigation.

GRENVILLE CANAL.

Length of canal.	5 $\frac{3}{4}$ miles
Number of locks.	5
Dimensions of locks.	200 x 45 feet.
Total rise or lockage.	43 $\frac{3}{4}$ feet.
Depth of water on sills.	9 "
Breadth of canal at bottom.	40 to 50 feet.
Breadth of canal at surface of water.	50 to 80 "

This canal, by which the Long Sault rapids are avoided, is about 56 miles below the city of Ottawa, up to which point the River Ottawa affords unimpeded navigation.

RIDEAU NAVIGATION.

The Rideau system connects the River Ottawa at the city of Ottawa with the eastern end of Lake Ontario at Kingston.

Length of navigation..	126½ miles.
Number of locks from Ottawa to Kingston..	{ 33 ascending. 14 descending.
Total lockage ..457½ feet. { 292½ rise and 165½ fall. }	at low water.
Dimensions of locks..	134 x 33 feet.
Depth of water on sills..	5 feet.
Navigation depth through the several reaches..	5 feet.
Breadth of canal reaches at bottom..	{ 54 feet in rock. 60 feet in earth.
Breadth of canal at surface of water..	80 feet in earth.

PERTH BRANCH.

Length of canal..	7 miles.
Number of locks..	2
Dimensions of locks..	134 feet x 33 feet.
Total rise or lockage..	26 "
Depth of water on sills..	5 " 6 inches.
Length of dam..	200 "
Breadth of canal at surface of water..	80 "
Breadth of canal at bottom..	{ 40 " in rock. 60 " in clay.

The Perth branch of the Rideau canal affords communication between Beveridge's bay, on Lake Rideau, and the town of Perth.

The summit level of the Rideau system is at upper Lake Rideau, but several of the descending reaches are also supplied by waters which have been made tributary to them. The following description gives the sources of supply:—

From the summit, the route towards Ottawa follows the Rideau river, and that towards Kingston follows the River Cataraqui. The supply of water for the canal is derived from the reserves given in detail below.

These may be divided into three systems, viz.:—

1. The summit level, supplied by the Wolf lake system.
2. The eastern descending level to Ottawa, supplied by the River Tay system, discharging into Lake Rideau.
3. The southwest descending level to Kingston, supplied by the Mud lake system, formerly known as the Devil lake system, discharging into Lake Opinicon.

Lake Opinicon receives the waters of Buck lake and Rock lake.

All these waters on the descending level, supplemented by those of Lake Loughboro', flow to Cranberry lake, which, discharging through Round Tail outlet, forms the River Cataraqui. The river, rendered navigable by dams at various points, affords a line of navigation to Kingston.

RICHELIEU AND LAKE CHAMPLAIN.

This system, commencing at Sorel, at the confluence of the Rivers St. Lawrence and Richelieu, 46 miles below Montreal, extends along the River Richelieu, through the St. Ours lock to the basin at Chambly; thence, by the Chambly canal, to St.

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Johns, and up the River Richelieu to Lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, at the southern end of Lake Champlain, connection is obtained by means of the Champlain canal with the River Hudson, by which the city of New York is directly reached.

The following table shows the distances between Sorel and New York:—

Sections of Navigation.	Interme- diate Distance.	Total Distances.
	Miles.	Miles.
Sorel to St. Ours Lock.....	14	14
St. Ours Lock to Chambly Canal	32	46
Chambly Canal	12	58
Chambly Canal to boundary line	23	81
Boundary line to Champlain Canal.....	111	192
Champlain Canal to junction with Erie Canal.....	66	258
Erie Canal from junction to Albany.....	7	265
Albany to New York	146	411

ST. OURS LOCK AND DAM.

Length.....	$\frac{1}{8}$ mile.
Number of locks.....	1
Dimensions of lock.....	200 feet by 45 feet.
Total rise or lockage.....	5 feet.
Depth of water on sills.....	7 “
Length of dam in western channel.....	690 “

At St. Ours, 14 miles from Sorel, the River Richelieu is divided by a small island into two channels. The St. Ours lock is in the eastern channel.

There is a navigable depth in the Richelieu of 7 feet between St. Ours lock and Chambly basin, a distance of 32 miles.

CHAMBLY CANAL.

Length of canal.....	12 miles.
Number of locks.....	9
Dimensions of locks—	
Guard lock No. 1 at St. Johns.....	122 feet
Lift lock No. 2.....	124 “
Lift locks Nos. 3, 4, 5, 6.....	118 “
Lift locks Nos. 7, 8, 9, combined.....	125 “
Total rise or lockage.....	74 “
Depth of water on sills.....	6 $\frac{1}{2}$ “
Breadth of canal at bottom.....	36 “
Breadth of canal at surface of water.....	60 “

} From 22 $\frac{1}{2}$
to 24 feet
wide.

This canal succeeds the 32 miles of navigable water between St. Ours lock and Chambly basin. The canal overcomes the rapids between Chambly and St. Johns.

TRENT CANAL.

The term "Trent canal" is applied to a series of water stretches, which do not, however, form a connected system of navigation, and which, in the present condition, are efficient only for local use. By various works this local use has been extended, and by others, now in progress and contemplation, this will become a through route between Lake Ontario and Lake Huron.

The series is composed of a chain of lakes and rivers, extending from Trenton, at the mouth of the River Trent, on the Bay of Quinté, Lake Ontario, to Lake Huron.

Many years ago the utilizing of these waters for the purpose of through water communication between Lake Huron and Lake Ontario was projected.

The course, as originally contemplated and modified, is as follows:—

Through the River Trent, Rice Lake, the River Otonabee and Lakes Clear, Stony, Lovesick, Deer, Buckhorn, Chemong, Pigeon, Sturgeon and Cameron to Lake Balsam, the summit water, about 155 miles from Trenton; from Lake Balsam by a canal and the River Talbot to Lake Simcoe. The route from Lake Simcoe to Georgian bay, Lake Huron, has not yet been determined.

The full execution of the scheme, commenced by the Imperial Government in 1837, was deferred. By certain works, however, below specified, sections of these waters have been made practicable for navigation, and the whole scheme is now being carried out. A branch of the main route, extending from Sturgeon lake south, affords communication with the town of Lindsay, and, through Lake Scugog, to Port Perry, a distance of approximately 174 miles from Trenton.

The works by which the Trent navigation has been improved to date comprise short canals with locks at Hastings, Peterborough, Peterborough to Lakefield 7 locks, one being a hydraulic lift; Young's Point, Burleigh Falls, Lovesick, Buckhorn, Bobcaygeon, Fenelon Falls, Rosedale, and six locks between Balsam and Simcoe lakes, one being a hydraulic lift; also lock and dam at Lindsay.

Also dams at Healey Falls, Hastings, Peterborough, Peterborough to Lakefield, 6; Young's Point, Burleigh, Lovesick, Buckhorn, Bobcaygeon, Fenelon Falls, Rosedale, and three between Balsam and Simcoe lakes.

Bridges also have been built at many of the locks and at other places.

For convenience the canal may be divided into the following divisions, the lengths being given:—

ONTARIO-RICE LAKE DIVISION.

Embracing the canal and river navigation between Trenton, on the Bay of Quinté, to Rice lake, 56 miles.

The all-river route from Trenton, on the Bay of Quinté, to Rice lake was fully decided upon by the government during the session of 1907, and the work of construction was begun that fall. The improvement is carried out on the principle of damming the river at suitable points by means of dams, and connecting the pools thus created by means of locks and short stretches of canal. The locks on this division will be 175 feet long, 33 feet wide, with 8 feet 4 inches of water on the sills. In the reaches there will be a minimum depth of 9 feet of water. For the purpose of construction, this division of 56 miles has been divided into seven sections, all of which are under contract. Rice lake is 369 feet above low water level of Lake Ontario, which height will be overcome by 18 locks.

PETERBOROUGH-RICE LAKE DIVISION.

Embracing that stretch of river and lake navigation from the lower end of Rice lake to Peterborough, 32 miles.

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This division is navigable with a minimum depth of 6 feet.

At Hastings are a concrete lock, replacing the old masonry lock, and a concrete dam, replacing the old timber structure which formerly existed at that point; these maintain navigation on the Trent River, Rice Lake and the Otonabee River to Peterborough, a distance of about 38 miles.

At Peterborough, 89 miles from Trenton, is a masonry lock and a concrete dam which maintain navigation through Little lake to lock No. 6 of the Peterborough-Lakefield division, a distance of about three-quarters of a mile.

PETERBOROUGH-LAKEFIELD DIVISION.

Embracing that stretch of river and canal navigation from Little lake at Peterborough to Lakefield, 10 miles.

Construction completed and canal in operation with a minimum depth of 6 feet for navigation.

From Peterborough to Lakefield, navigation is maintained on the Otonabee river by a series of concrete locks and timber dams as follows:—

Leaving Little lake through lock No. 6, in a distance of about half a mile, the hydraulic lift lock is reached, where there is a lift of 65 feet into a reach which extends to lock No. 5, about five miles from Peterborough, the last mile only of this reach being in the river; from here to Lakefield, locks 5, 4, 3, 2 and 1, with their respective dams, give navigation to Lakefield, about ten miles from Peterborough, or 99 from Trenton, and thence on five miles further to Young's Point.

KAWARTHA LAKES DIVISION.

Embraces that stretch of lake and river navigation from Lakefield to the entrance to the canal on the west shore of Balsam lake—62 miles.

Navigable with a minimum depth of 6 feet. Also in this division, may be included the Lindsay branch which embraces the Scugog lake and river from main channel on Sturgeon lake to Port Perry, the distance being about 30 miles, not included in the total 62 miles, above mentioned. A new lock and dam at Lindsay on this branch have recently been built.

At Young's Point, a masonry lock and timber dam maintain navigation through Clear and Stony lakes to Burleigh, a distance of about nine miles.

At Burleigh, a masonry lock of two lifts and concrete dam maintain navigation through Lovesick lake, about two miles, to Lovesick. A new concrete dam has recently been completed at Burleigh.

At Lovesick, a masonry lock and timber dam maintain navigation through Deer bay for about five miles to Buckhorn.

At Buckhorn, a masonry lock and new concrete dam maintain navigation for about 16½ miles through Buckhorn and Pigeon lakes to Bobcaygeon, 136 miles from Trenton, and also as branches, maintain navigation from Buckhorn lake through Chemong lake to Bridgenorth, about 8 miles, and in the Pigeon river from Pigeon lake to Omeme, about 10 miles.

At Bobcaygeon, a masonry lock and two dams, one being recently rebuilt of concrete and the other a timber one, maintain navigation through Sturgeon lake and Fenelon river, a distance of about 14½ miles to Fenelon Falls.

At Fenelon Falls is a short canal, a masonry lock of two lifts and a new concrete dam which maintain navigation across Cameron lakes to Rosedale, a distance of about 3½ miles, to a new concrete lock of the same dimensions as those of the Ontario-Rice lake division.

At Rosedale, the new concrete lock and dam maintain navigation on Balsam lake, the summit level of the canal, which extends from Rosedale to the hydraulic

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lock at Kirkfield, a distance of twelve miles; half of this distance is through a canal connecting Balsam lake with the lock, which is about 166 miles from Trenton.

SIMCOE-BALSAM LAKE DIVISION.

Extends from Balsam lake to Gamebridge on Lake Simcoe—18.2 miles.

Construction completed and canal in operation with a minimum depth of 6 feet.

At the Kirkfield hydraulic lock is a drop of 50.44 feet from the summit level. From this point to Gamebridge on Lake Simcoe, 179 miles from Trenton, the route consists of canal and river reaches maintained by damming the Talbot river. There are five new concrete locks numbered 1, 2, 3, 4 and 5, with concrete dams at Nos. 1 and 3.

HOLLAND RIVER DIVISION.

This contemplated the canalization of the Holland river between Lake Simcoe and Newmarket, 12.3 miles. It has not been completed, and work on it was discontinued in December, 1911.

The following is a list of locks now in use, with their dimensions, in order of location, from Hastings to Gamebridge on Lake Simcoe.

	Length between Hollow Quoins	Width.	Depth on Sill.	Lift.
	Ft.	Ft.	Ft.	Ft.
1 Lock at Hastings.....	175	33	8 4 in.	9
1 " at Peterborough.....	134	33	6	9
1 " No. 6, Peterborough—Lakefield Division.....	142	33	6	12
1 " at Peterborough, hydraulic lift lock No. 1.....	140	33	6	65
1 " No. 5, Peterborough—Lakefield Division.....	142	33	6	14
1 " No. 4, " " " ".....	142	33	6	12
1 " No. 3, " " " ".....	142	33	6	12
1 " No. 2, " " " ".....	142	33	6	10
1 " No. 1, " " " ".....	142	33	6	16
1 " at Young's Point.....	134	33	6	6
2 " at Burleigh, each 11½ feet.....	134 150	33	6	23
	{ Upper Lower			
1 " at Lovesick.....	134	33	6	4
1 " at Buckhorn.....	134	33	6	9
1 " at Bobcaygeon.....	134	33	6	7
2 " at Fenelon Falls, each 12 feet.....	134 150	33	6	21
	{ Upper Lower			
1 " at Rosedale.....	175	33	8 4 in.	4
1 " at Kirkfield, hydraulic lift No. 2.....	140	33	6	50.44
1 " No. 1, Simcoe—Balsam Lake Division.....	142	33	6	21
1 " No. 2, " " " ".....	142	33	6	14
1 " No. 3, " " " ".....	142	33	6	14
1 " No. 4, " " " ".....	142	33	6	14
1 " No. 5, " " " ".....	142	33	6	11
24				
1 " at Lindsay, Seugog Branch.....	142	33	6	6.5

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ST. PETER'S CANAL, CAPE BRETON.

Length of canal.	About 2,600 feet.
Breadth at water line.	55 feet.
Lock.	1 tidal lock, 4 pairs of gates.
Dimensions.	200 feet by 48 feet.
Depth of water on sills.	18 feet at lowest water.
Depth through canal.	19 feet.
Extreme rise and fall of tide in St. Peter's bay.	7 feet.

This canal connects St. Peter's bay on the southern side of Cape Breton, Nova Scotia, with the Bras d'Or lakes. It crosses an isthmus half a mile in width, and gives access from the Atlantic. A new Atlantic entrance and lock, 300 feet by 48 feet, are now under construction. These will replace the existing lock and entrance.

PART VIII.

MISCELLANEOUS STATEMENTS

Table of distances, Intercolonial and Prince Edward Island Railways.

INTERCOLONIAL RAILWAY.

Expenses, gross earnings, freight tonnage, profit or loss, and passengers, yearly since July 1, 1876.
Earnings, passenger, freight, mails and sundries, yearly since July 1, 1876.
Earnings, yearly since July 1, 1876.
Local and through freight, yearly since July 1, 1876.
Local and through passengers, yearly since July 1, 1876.
Coal carried from Nova Scotia collieries, yearly since July 1, 1876.
Grain carried for shipment, yearly since July 1, 1876.
Flour and meal carried, yearly since July 1, 1876.
Grain carried, yearly since July 1, 1876.
Lumber carried, yearly since July 1, 1876.
Live stock carried, yearly since July 1, 1876.
Raw and refined sugar carried, yearly since July 1, 1876.
Fresh and salt fish carried, yearly since July 1, 1876.
Ocean-borne goods carried, yearly since July 1, 1876.

WINDSOR BRANCH.

Earnings, expenses and profits or losses, yearly from 1880.

PRINCE EDWARD ISLAND RAILWAY.

Expenses, earnings, freight and passenger traffic and loss, yearly from 1875.

CANALS.

Statement showing total cost of construction and enlargement from Montreal to Port Arthur.
Statement showing total cost of construction and enlargement from Lachine to Ottawa.
Statement showing total cost of construction and enlargement from Ottawa to Kingston.
Statement showing total cost of construction and enlargement from St. Johns to Sorel.
Statement showing total cost of construction and enlargement from Lake Ontario to Georgian Bay.
Statement showing total cost of construction and enlargement from Atlantic Ocean to Bras d'Or Lakes.
Freight traffic in 1912 and 1913.
Dates of opening and closing of canals for the season of 1913.

INTERCOLONIAL RAILWAY.

The Intercolonial railway touches six Atlantic ocean ports, namely Pointe du Chêne, Pictou, Halifax, St. John, Sydney and North Sydney, as well as the River St. Lawrence ports of Lévis, opposite Quebec, and Montreal.

The total length of the road operated during the year ended March 31, 1914, was 1,457.77 miles.

The following are the through distances:—

	Miles.
Montreal to Halifax, via Lévis.	836.34
“ St. John, via Lévis.	740
“ Sydney, via Lévis.	988.74
“ North Sydney, via Lévis.	980.47

Freight is carried direct via St. Henri, which would reduce each of the above distances by 3 miles.

MAIN LINE AND BRANCHES.

	Miles.
Halifax to Truro.	61.87
Dartmouth Branch.	12.00
Truro to Moncton.	123.77
Moncton to St. John.	89.31
Pointe du Chêne Branch.	11.98
Moncton to Campbellton.	185.37
Campbellton to Ste. Flavie.	105.03
Ste. Flavie to Rivière du Loup.	83.29
Rivière Ouelle Branch.	6.19
Rivière du Loup to Pointe Lévis.	115.55
Hadlow to Chaudière Curve.	5.63
Chaudière to Ste. Rosalie.	115.53
St. Charles Junction to Chaudière Junction.	16.73
Nicolet Branch	14.70
Dalhousie Branch.	6.28
Pictou to Oxford Junction.	69.39
Brown's Point to Stellarton	11.90
Junction near New Glasgow to Pictou Landing.	8.46
Pugwash Junction to Pugwash.	4.54
Truro to Mulgrave.	122.30
Point Tupper to Sydney.	91.17
Sydney Mines Loop.	16.60
Fredericton to Derby Junction.	109.82
Chatham Junction to Loggieville.	16.78
Ferona Junction to Sunny Brae.	12.48

1,416.67

LEASED.

Length of Main line from Pointe Lévis to Hadlow.	1.49	
Chaudière Curve to Chaudière.	1.18	
Ste. Rosalie Junction to Montreal.	37.63	40.30

Total miles.	1,456.97
Mulgrave to Point Tupper (Ferry).	0.80

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FREIGHT BRANCHES OWNED.

	Miles.
Switch near North street to D. W. T., Halifax.. . . .	0.85
Halifax Cotton Factory.. . . .	2.10
Dartmouth Station to end of line.. . . .	2.12
Sydney Station to wharf.. . . .	1.06
North Sydney Station to wharf.. . . .	0.82
Switch near Pictou landing to coal wharf.. . . .	0.75
Pictou Station to wharf.. . . .	0.15
Pictou Station to Copper Crown smelter.. . . .	0.72
Logan's Tannery siding.. . . .	0.48
Pugwash Station to wharf.. . . .	0.07
Sackville Wharf branch.. . . .	0.47
Dorchester Wharf branch.. . . .	1.00
Moncton Wharf branch.. . . .	1.00
Courtenay Bay branch.. . . .	2.39
St. John water front extension.. . . .	0.44
St. John Station to Deep Water wharf.. . . .	0.28
Newcastle Wharf branch.. . . .	1.75
Dalhousie Station to wharf.. . . .	0.50
Campbellton Wharf branch.. . . .	0.43
Rimouski Wharf branch.. . . .	2.00
Trois Pistoles spur.. . . .	2.38
Rivière du Loup Wharf branch.. . . .	4.35
St. Pacôme Spur.. . . .	1.27
Nicolet Station to wharf.. . . .	2.08
Carmel Branch, main line to village.. . . .	1.05
Fort Lawrence Spur.. . . .	1.18
Wallace Spur.. . . .	2.00
Petit Rocher spur to wharf.. . . .	1.35
	<hr/>
	35.04

WINDSOR BRANCH.

This road extends from Windsor Junction, on the Intercolonial railway, to Windsor, N.S., a distance of 32 miles.

PRINCE EDWARD ISLAND RAILWAY.

LENGTH OF LINE.

	Miles.
Souris to Tignish.. . . .	165.5
Mount Stewart to Georgetown.. . . .	24.4
Charlottetown to Royalty Junction.. . . .	5.3
Emerald Junction to Cape Traverse.. . . .	11.8
Charlottetown to Murray Harbour.. . . .	47.8
Montague Junction to Montague.. . . .	6.2
Harmony to Elmira.. . . .	9.9
Millview Loop.. . . .	4.3
	<hr/>
	275.2

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY.

THE following table shows the working expenses, gross earnings, the tonnage of freight and number of passengers carried each year from July 1, 1876, to March 31, 1914.

Year.	Average miles in Operation	Working Expenses.	Gross Earnings.	Profit.	Loss.	Tons of Freight Carried.	No. of Passengers Carried.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.		
1876-77..	714	1,661,673 55	1,154,445 33	.....	507,228 22	421,327	613,420
1877-78..	714	1,816,273 56	1,378,946 78	.....	432,326 78	552,710	618,957
1878-79..	714	2,010,183 22	1,294,009 69	.....	716,083 53	510,861	640,101
1879-80..	829	1,603,439 71	1,506,298 48	.....	97,131 23	561,924	581,483
1880-81..	840	1,759,851 27	1,760,393 92	542 65	.....	725,777	631,245
1881-82..	840	2,069,657 45	2,079,262 66	9,605 18	.....	838,956	779,994
1882-83..	840	2,369,373 27	2,370,910 10	17,547 18	.....	970,961	878,600
1883-84..	887	2,377,433 62	2,384,414 92	6,981 30	.....	1,009,237	944,636
1884-85..	941	2,519,751 56	2,441,203 66	.....	78,547 90	989,986	957,228
1885-86..	946	2,583,999 67	2,450,093 88	.....	133,905 79	1,023,788	932,880
1886-87..	977	2,922,369 62	2,660,116 93	.....	262,252 69	1,145,020	942,784
1887-88..	971	3,366,781 74	2,983,336 05	.....	383,445 69	1,288,823	1,040,163
1888-89..	971	3,244,647 73	2,967,801 00	.....	276,847 73	1,218,877	1,136,272
1889-90..	971	3,560,575 74	3,012,739 87	.....	847,835 87	1,368,819	1,219,233
1890-91..	1,094	3,662,341 94	2,977,395 38	.....	684,946 56	1,304,534	1,298,304
1891-92..	1,142	3,439,377 00	2,945,441 97	.....	493,935 03	1,264,575	1,297,732
1892-93..	1,142	3,045,317 50	3,065,499 09	20,181 59	.....	1,338,080	1,292,878
1893-94..	1,142	2,981,671 98	2,987,516 17	5,838 29	.....	1,342,710	1,304,062
1894-95..	1,142	2,936,902 74	2,940,717 95	3,815 21	.....	1,276,816	1,352,664
1895-96..	1,142	3,012,827 62	2,957,670 10	.....	55,157 52	1,379,618	1,471,866
1896-97..	1,145	2,925,938 67	2,866,028 02	.....	59,910 65	1,296,928	1,501,690
1897-98..	1,201	3,327,648 51	3,117,669 85	.....	209,978 66	1,434,576	1,523,444
1898-99..	1,315	3,675,686 21	3,738,331 44	62,645 43	.....	1,750,761	1,603,095
1899-1900..	1,315	4,431,404 69	4,552,071 71	120,667 02	.....	2,151,208	1,029,754
1900-01..	1,315	5,460,404 64	4,972,235 87	.....	488,166 77	2,111,310	2,517,295
1901-02..	1,315	5,574,563 30	5,671,385 91	96,822 61	.....	2,385,816	2,186,226
1902-03..	1,315	6,196,653 19	6,324,323 72	127,670 53	.....	2,790,737	2,404,230
1903-04..	1,321	7,239,982 04	6,339,231 43	.....	900,750 61	2,664,149	2,663,156
1904-05..	1,446	8,508,826 75	6,783,522 83	.....	1,725,303 92	2,782,257	2,810,960
1905-06..	1,446	7,881,914 36	7,643,829 90	61,915 54	.....	3,156,189	2,737,160
1906-07..	1,448	6,030,171 83	6,248,311 00	218,139 17	.....	2,606,073	2,044,847
1907-08..	1,448	9,137,435 53	9,173,558 89	16,123 27	.....	4,134,064	2,789,371
1908-09..	*1,447-13	9,328,021 55	8,527,069 46	.....	800,952 09	3,573,972	2,907,232
1909-10..	1,447-13	8,645,070 33	9,268,234 99	623,164 66	.....	3,927,240	3,123,347
1910-11..	1,455-63	9,595,976 79	9,863,783 40	267,806 61	.....	4,104,400	3,232,895
1911-12..	1,468-15	10,591,035 84	10,593,785 84	2,750 00	.....	4,536,599	3,416,553
1912-13..	1,467-73	*11,984,482 69	11,984,482 69	.....	.....	5,203,469	3,763,115
1913-14..	1,457-77	**12,878,549 00	12,878,549 00	.....	.....	5,287,740	3,983,511

†The year 1906-7 was nine months only; the Canadian fiscal year having been changed to close on March 31, instead of June 30.

*The railway was remeasured in this year.

†Of this total \$4,500 was paid for compassionate allowances by special vote of Parliament.

**Of this total \$11,350 was paid for compassionate allowances by special vote of Parliament.

5 GEORGE V., A. 1915

INTERCOLONIAL RAILWAY.

STATEMENT of Earnings, yearly, from July 1, 1876, to March 31, 1914.

Year.	Miles in Operation.	Passenger Traffic.	Freight Traffic.	Mails and Sundries.	Total.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
1876-7	714	460,363 15	607,564 99	86,512 21	1,154,443 33
1877-8	714	475,256 82	801,709 82	101,985 07	1,378,946 78
1878-9	714	451,893 29	752,490 85	88,715 55	1,294,099 69
1879-80	829	490,338 66	915,486 50	100,473 32	1,506,298 48
1880-1	810	545,114 48	1,113,872 21	101,407 23	1,760,493 92
1881-2	840	651,299 74	1,303,496 00	124,470 72	2,679,262 66
1882-3	840	741,992 72	1,487,601 98	141,326 49	2,379,910 10
1883-4	887	775,784 77	1,461,390 37	147,240 78	2,383,414 92
1884-5	941	747,285 13	1,542,052 10	151,566 35	2,441,203 66
1885-6	946	765,900 03	1,523,487 72	160,706 13	2,450,094 88
1886-7	977	828,328 28	1,677,971 59	153,817 06	2,660,116 93
1887-8	971	844,448 07	1,932,877 85	166,010 13	2,983,336 95
1888-9	971	906,246 77	1,909,094 44	152,460 09	2,967,801 00
1889-90	971	895,094 53	1,964,646 86	152,998 48	3,012,739 87
1890-1	1,094	962,316 88	1,853,629 88	160,448 62	2,977,395 38
1891-2	1,142	961,427 94	1,803,529 03	180,485 00	2,946,441 97
1892-3	1,142	1,002,912 74	1,868,853 84	184,468 80	3,065,499 09
1893-4	1,142	958,915 13	1,834,126 34	193,762 51	2,987,502 27
1894-5	1,142	963,914 44	1,82,608 54	194,194 97	2,940,717 95
1895-6	1,142	971,426 26	1,788,813 18	197,400 66	2,957,640 10
*1896-7	1,145	979,005 57	1,687,050 42	199,472 03	2,866,028 02
1897-8	1,201	1,053,864 64	1,857,740 06	206,065 15	3,117,669 85
1898-9	1,315	1,167,453 16	2,348,096 58	222,781 70	3,738,331 44
1899-1900	1,315	1,404,469 87	2,912,790 52	234,811 32	4,552,071 91
1900-1	1,315	1,607,166 79	3,121,006 15	244,062 93	4,972,235 87
1901-2	1,315	1,770,941 13	3,644,513 42	255,931 36	5,761,385 91
1902-3	1,315	1,927,916 87	4,128,255 00	268,151 75	6,324,323 72
1903-4	1,321	2,021,568 40	4,041,122 48	276,540 55	6,339,231 43
1904-5	1,446	2,105,066 75	4,373,178 75	305,277 53	6,783,522 33
1905-6	1,446	2,297,716 52	5,019,805 53	326,307 85	7,643,829 90
1906-7	1,448	1,952,438 88	4,032,745 00	263,127 12	†6,248,311 05
1907-8	1,448	2,711,416 98	6,054,493 45	407,643 37	9,173,358 80
1908-9	*1,447 13	2,628,218 57	5,502,550 58	396,300 31	8,527,069 46
1909-10	1,447 13	2,765,884 66	6,048,884 18	453,466 15	9,268,234 99
1910-11	1,455 63	2,899,419 82	6,344,595 66	619,767 92	9,863,783 40
1911-12	1,468 15	3,017,304 63	7,008,300 49	568,180 72	10,593,785 84
1912-13	1,467 73	3,438,447 32	8,028,760 13	517,275 24	11,984,482 69
1913-14	1,457 77	3,674,878 75	8,469,590 33	734,079 92	12,878,549 00

* As measured in this year.

† 1906-7, nine months only.

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY.

STATEMENT showing the Number of Tons of Local and Through Freight carried, yearly, from July 1, 1876, to March 31, 1914.

Year.	Miles in Operation.	Local Freight.	Through Freight.	Total.
1876-7	714	The information for these years was destroyed when the general offices in Moncton were burned		421,327
1877-8	714			522,710
1878-9	714			510,861
1879-80	829			561,924
1880-1	840			723,777
1881-2	840	571,784	267,272	838,956
1882-3	840	537,025	443,436	970,961
1883-4	887	584,581	424,658	1,009,237
1884-5	941	506,574	483,352	989,936
1885-6	946	580,076	443,712	1,023,788
1886-7	977	633,455	509,565	1,143,020
1887-8	971	727,599	561,224	1,288,823
1888-9	971	624,436	594,441	1,218,877
1889-90	971	756,696	612,123	1,368,819
1890-1	1,094	797, 92	507,042	1,304,534
1891-2	1,142	750,783	513,792	1,264,575
1892-3	1,142	1,030,628	357,452	1,388,080
1893-4	1,142	966,114	376,596	1,342,710
1894-5	1,142	901,374	366,442	1,267,816
1895-6	1,142	1,101,229	368,389	1,379,618
1896-7	1,145	927,167	368,859	1,296,028
1897-8	1,201	1,053,569	381,007	1,434,576
1898-9	1,315	1,351,569	399,192	1,750,761
1899-1900	1,315	1,713,928	437,280	2,151,208
1900-1	1,315	1,633,671	477,639	2,111,310
1901-2	1,315	1,914,551	471,265	2,385,816
1902-3	1,315	2,239,993	550,744	2,790,737
1903-4	1,321	2,123,261	540,888	2,664,149
1904-5	1,446	2,119,528	662,729	2,782,257
1905-6	1,446	2,413,863	742,326	3,156,189
1906-7	1,448	1,996,869	609,204	*2,606,073
1907-8	1,448	3,227,425	906,629	4,134,064
1908-9	†1,447 13	2,742,454	831,518	3,573,972
1909-10	1,447 13	2,958,642	968,598	3,927,240
1910-11	1,455 63	3,0 5,437	1,015,963	4,101,400
1911-12	1,468 15	3,452,489	1,084,110	4,536,599
1912-13	1,467 73	3,913,373	1,290,096	5,203,469
1913-14	1,457 77	3,783,578	1,504,162	5,287,740

* 1906-7, nine months only.

† As remeasured in this year.

5 GEORGE V.: A. 1915

INTERCOLONIAL RAILWAY.

STATEMENT of the Number of Local and Through Passengers carried, yearly, from July 1, 1876, to March 31, 1914.

Year.	Miles in Operation.	Number of Local Passengers.	Number of Through Passengers.	Total.
1876-7.	714	The information for these years was destroyed when the general offices in Moacton were burned		613,420
1877-8.	714			619,957
1878-9.	714			640,101
1879-80.	829			581,483
1880-1.	840			631,245
1881-2.	840	647,534	132,460	779,994
1882-3.	840	728,186	150,414	878,600
1883-4.	887	784,715	159,221	944,636
1884-5.	941	812,028	145,200	957,228
1885-6.	946	784,817	148,063	932,880
1886-7.	977	814,632	128,752	942,784
1887-8.	971	948,324	91,839	1,040,163
1888-9.	971	1,050,592	85,680	1,136,272
1889-90.	971	1,112,695	91,531	1,219,233
1890-1.	1,094	1,203,814	94,490	1,298,304
1891-2.	1,142	1,198,649	91,083	1,297,732
1892-3.	1,142	1,188,827	104,051	1,292,878
1893-4.	1,142	1,216,027	85,035	1,301,062
1894-5.	1,142	1,272,284	80,383	1,352,667
1895-6.	1,142	1,346,803	85,063	1,471,866
1896-7.	1,145	1,416,631	85,059	1,501,690
1897-8.	1,201	1,438,590	89,854	1,523,444
1898-9.	1,315	1,504,652	98,443	1,103,095
1899-1900.	1,315	1,878,858	112,896	1,791,754
1900-1.	1,315	1,905,599	119,696	2,025,295
1901-2.	1,315	2,061,196	125,030	2,186,226
1902-3.	1,315	2,555,013	149,217	2,404,230
1903-4.	1,321	2,447,843	215,313	2,663,156
1904-5.	1,416	2,580,928	221,032	2,810,960
1905-6.	1,446	2,491,472	245,688	2,737,160
*1906-7.	1,448	1,853,126	191,721	2,044,846
1907-8.	1,448	2,593,886	195,485	2,789,371
1908-9.	1,447-13	2,656,217	251,020	2,907,237
1909-10.	1,417-13	2,873,547	248,777	3,122,324
1910-11.	1,455-63	2,968,435	264,460	3,232,895
1911-12.	1,468-15	3,126,922	289,631	3,416,553
1912-13.	1,467-73	3,448,411	314,704	3,763,115
1913-14.	1,457-77	3,637,482	346,029	3,983,511

* 1906-7, nine months only.

† As remeasured in this year.

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The following table shows the number of Tons of Coal carried over the Inter-colonial railway from the Nova Scotia collieries to Ste. Rosalie, Montreal and St. John for points west thereof, and to local stations in each year since July 1, 1876.

Year.	For the West.			To Local Stations.	Total.
	Via Ste. Rosalie.	Via Montreal.	Via St. John.		
1876-7				103,420	103,420
1877-8				97,043	97,043
1878-9		300		112,232	112,532
1879-80		1,097		135,369	136,466
1880-1		6,102	4,022	174,483	184,607
1881-2		18,015	11,779	218,364	248,158
1882-3		12,837	22,206	227,380	262,423
1883-4		32,014	19,532	252,014	293,562
1884-5		133,440	1,773	213,791	349,004
1885-6		171,179	21,150	215,272	407,592
1886-7		192,871	27,536	233,178	455,585
1887-8		183,704	36,228	309,727	529,659
1888-9		160,026	27,923	338,538	526,487
1889-90		164,453	25,126	366,967	554,546
1890-1		113,996	60,213	344,829	498,038
1891-2		35,447	5,918	392,441	433,806
1892-3		136,808	3,775	402,653	543,296
1893-4		102,273	8,028	367,390	478,691
1894-5		67,082	7,865	310,253	385,200
1895-6		53,124	9,681	369,708	432,513
1896-7		38,395	12,305	331,469	382,172
1897-8		9,084	9,796	351,069	369,949
1898-9		4,647	5,399	484,163	494,206
1899-1900		3,495		599,714	603,289
1900-1		136			506,454
1901-2		1,131	5,763	3,640	546,986
1902-3	2,200	7,817	6,775	725,727	742,519
1903-4	2,260	637	513	691,346	694,761
1904-5	800	265	5,022	596,290	602,377
1905-6	7,542	1,625	661	610,444	620,272
*1906-7	1,737	2,808	3,252	624,833	632,630
1907-8	22	183	4,245	1,061,694	1,066,134
1908-9	514	945	4,243	909,050	914,752
1909-10	42	890	1,452	1,003,120	1,005,504
1910-11	90	180	633	983,921	984,824
1911-12	73		303	1,111,157	1,111,533
1912-13			425	1,216,636	1,217,061
1913-14	26			1,237,550	1,237,576

* 1906-7, nine months only.

5 GEORGE V., A. 1915

TABLE showing the number of Bushels of Grain carried during each year over the Intercolonial railway for shipment since July 1, 1876.

Year.	Bushels.		Total.	Year.	Bushels.		Total.
	Via Chaudière.	Via St. John.			Via Chaudière.	Via St. John.	
1876-7				1895-6	Nil.	Nil.	Nil.
1877-8				1896-7	"	"	"
1878-9				1897-8	8,000	"	8,000
1879-80				1898-9	30,000	"	30,000
1880-1				1899-1900	13,239	"	13,239
1881-2				1900-1	147	"	147
1882-3	31,011		31,011	1901-2	Nil.	"	Nil.
1883-4	73,389		73,389	1902-3	"	"	"
1884-5	300,901		300,901	1903-4	147,438	"	147,438
1885-6	389,122		389,122	1904-5	Nil.	"	Nil.
1886-7	575,880		575,880	1905-6	170,000		170,000
1887-8	69,021		69,021	1906-7			Nil.
1888-9	129,725		129,725	1907-8			"
1889-90	502,012		502,012	1908-9			"
1890-1	148,803	59,543	218,337	1909-10			"
1891-2	845,997	519,500	1,265,497	1910-11	*233,839	2,000	235,839
1892-3	156,306	197,666	352,975	1911-12	†122,734	1,215,574	1,338,308
1893-4	Nil.	8,026	8,026	1912-13	*2,021,901		2,021,901
1894-5	"	Nil.	Nil.	1913-14	*2,251,117	966,800	3,217,917

* Via Montreal. 1906-7, nine months only. † Via Halifax.

TABLE showing the number of Barrels of Flour and Meal carried during each year over the Intercolonial railway since July 1, 1876.

Year.	Barrels.	Year.	Barrels.
1876-7	254,710	1895-6	822,097
1877-8	557,772	1896-7	847,701
1878-9	630,329	1897-8	987,701
1879-80	535,248	1898-9	1,157,250
1880-1	672,310	1899-1900	1,234,077
1881-2	692,095	1900-1	1,292,106
1882-3	983,916	1901-2	1,311,707
1883-4	817,134	1902-3	1,521,540
1884-5	935,977	1903-4	1,607,050
1885-6	761,127	1904-5	1,769,480
1886-7	763,894	1905-6	1,882,630
1887-8	871,838	1906-7	1,531,140
1888-9	948,514	1907-8	1,528,620
1889-90	1,116,050	1908-9	1,466,920
1890-1	1,013,129	1909-10	1,608,170
1891-2	954,015	1910-11	1,696,280
1892-3	856,913	1911-12	1,873,640
1893-4	944,967	1912-13	2,094,990
1894-5	938,351	1913-14	1,960,920

1906-7, nine months only.

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TABLE showing the number of Bushels of Grain carried during each year over the Intercolonial railway since July 1, 1876.

Year.	Bushels.	Year.	Bushels.
1876-77.....	292,852	1895-96.....	1,064,385
1877-78.....	331,170	1896-97.....	1,093,499
1878-79.....	302,921	1897-98.....	1,551,372
1879-80.....	534,021	1898-99.....	2,595,353
1880-81.....	565,678	1899-1900.....	2,720,453
1881-82.....	560,253	1900-01.....	3,535,364
1882-83.....	1,195,601	1901-02.....	2,959,761
1883-84.....	654,673	1902-03.....	3,392,252
1884-85.....	734,902	1903-04.....	2,788,772
1885-86.....	849,800	1904-05.....	3,317,910
1886-87.....	1,018,395	1905-06.....	2,924,226
1887-88.....	1,219,035	1906-07.....	2,231,864
1888-89.....	1,256,158	1907-08.....	4,597,245
1889-90.....	2,610,202	1908-09.....	4,727,268
1890-91.....	2,890,921	1909-10.....	7,074,042
1891-92.....	3,776,677	1910-11.....	5,080,848
1892-93.....	1,514,619	1911-12.....	5,206,440
1893-94.....	1,304,684	1912-13.....	6,530,920
1894-95.....	1,036,384	1913-14.....	6,419,560

1906-7, nine months only.

TABLE showing the quantity of Lumber in feet carried during each year over the Intercolonial railway since July 1, 1876.

Year.	Feet.	Year.	Feet.
1876-77.....	50,096,474	1895-96.....	226,332,715
1877-78.....	56,626,547	1896-97.....	243,355,725
1878-79.....	55,626,696	1897-98.....	354,093,816
1879-80.....	55,462,654	1898-99.....	306,554,031
1880-81.....	72,841,388	1899-1900.....	379,350,074
1881-82.....	78,356,418	1900-01.....	396,858,964
1882-83.....	104,633,417	1901-02.....	428,051,029
1883-84.....	131,120,948	1902-03.....	459,231,589
1884-85.....	138,493,675	1903-04.....	465,379,803
1885-86.....	117,186,512	1904-05.....	518,434,310
1886-87.....	161,801,763	1905-06.....	572,878,600
1887-88.....	137,755,272	1906-07.....	452,602,703
1888-89.....	199,507,777	1907-08.....	754,759,383
1889-90.....	210,886,071	1908-09.....	571,395,101
1890-91.....	184,188,324	1909-10.....	677,805,611
1891-92.....	175,474,340	1910-11.....	647,327,499
1892-93.....	181,211,013	1911-12.....	656,418,588
1893-94.....	200,507,949	1912-13.....	830,654,000
1894-95.....	202,247,269	1913-14.....	1,00,08,496,30

1906-7, nine months only.

5 GEORGE V., A. 1915

TABLE showing the number of Live Stock carried during each year over the Inter-colonial railway since July 1, 1876.

Year.	Number.	Year.	Number.
1876-77.	34,414	1895-96.	64,651
1877-78.	46,498	1896-97.	72,082
1878-79.	47,584	1897-98.	89,301
1879-80.	70,990	1898-99.	109,821
1880-81.	61,574	1899-1900.	92,813
1881-82.	73,479	1900-01.	95,923
1882-83.	68,338	1901-02.	98,495
1883-84.	60,090	1902-03.	127,060
1884-85.	70,785	1903-04.	113,006
1885-86.	74,498	1904-05.	110,670
1886-87.	82,896	1905-06.	106,589
1887-88.	98,302	1906-07.	97,381
1888-89.	85,960	1907-08.	99,824
1889-90.	80,771	1908-09.	104,165
1890-91.	95,529	1909-10.	106,712
1891-92.	87,889	1910-11.	113,976
1892-93.	93,369	1911-12.	115,189
1893-94.	75,203	1912-13.	119,490
1894-95.	72,106	1913-14.	98,207

1906-7, nine months.

SESSIONAL PAPER No. 20

TABLE showing the number of Tons of Ocean-borne goods to and from Europe carried over the Intercolonial railway during each year since July 1, 1876.

Year.	Via Ste. Rosalie and from the West.	Via Mon- treal to and from the West.	Via St. John to and from the West.	To and from Local Stations.	Total.
1876-77.....		14,949		3,405	18,354
1877-78.....		21,628		2,643	24,271
1878-79.....		21,073		4,952	26,025
1879-80.....		15,454		3,334	18,788
1880-81.....		21,607		4,168	25,775
1881-82.....		24,875		7,911	32,786
1882-83.....		19,696		6,533	26,229
1883-84.....		22,787		8,405	31,192
1884-85.....		13,464		8,216	21,680
1885-86.....		16,923		9,811	26,734
1886-87.....		41,864		8,878	50,742
1887-88.....		17,340		11,481	28,821
1888-89.....		9,895		11,730	21,625
1889-90.....		9,923		10,764	20,687
1890-91.....		9,716		23,835	33,571
1891-92.....		7,295		12,319	19,714
1892-93.....		3,023	204	13,455	16,682
1893-94.....		6,749	213	10,399	17,361
1894-95.....		3,767	314	16,748	20,829
1895-96.....		2,654	263	17,239	20,156
1896-97.....		5,950	1,637	18,633	26,220
1897-98.....		2,462	243	31,555	34,263
1898-99.....		6,880	307	37,108	39,794
1899-1900.....	322	7,780	1,142	155,514	163,838
1900-01.....	1,106	11,925	1,528	172,733	183,147
1901-02.....	817	21,377	1,194	124,695	138,631
1902-03.....	2,079	15,325	2,994	146,070	174,520
1903-04.....	284	17,217	3,683	85,853	105,149
1904-05.....	2,026	15,922	5,337	128,462	153,042
1905-06.....	1,384	16,652	436	110,447	128,219
1906-07.....	2,440	16,652	519	134,541	154,052
1907-08.....	2,487	23,402	649	119,913	146,451
1908-09.....	2,367	21,064	5,818	131,273	160,522
1909-10.....	7,220	27,607	6,927	130,776	172,530
1910-11.....	9,911	63,544	8,777	213,579	295,811
1911-12.....	13,144	74,870	11,114	192,012	291,140
1912-13.....	16,424	58,083	45,776	123,964	244,247
1913-14.....					

1906-7, nine months.

5 GEORGE V., A. 1915

TABLE showing the number of Tons of Raw and Refined Sugar carried over the Inter-colonial railway during each year since July 1, 1876.

Year.	Raw Sugar.					Refined Sugar.				
	Via Ste. Rosalie.	To Montreal for the West.	To St. John for the West.	To Local Stations	Total.	To Ste. Rosalie for the West.	To Montreal for the West.	To St. John for the West.	To Local Stations	Total.
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1876-77		340			340					
1877-78		186			186					
1878-79		1,041			1,041					
1879-80		12,220			12,220					
1880-81		13,872			13,862		4,022		2,902	6,924
1881-82		13,256		1,290	15,546		7,146		3,607	10,753
1882-83		9,465		508	9,973		11,126		5,497	16,623
1883-84		13,778		3,068	16,846		14,543		7,265	21,808
1884-85		10,381		3,661	14,042		18,024		8,445	26,469
1885-86		4,394		3,988	8,392		7,674		5,858	13,518
1886-87		20,450		8,500	28,950		15,044		8,395	23,439
1887-88		14,320		14,085	28,405		21,641		7,133	28,774
1888-89		24,358		7,160	31,518		12,955		11,120	24,075
1889-90		6,390		8,913	16,303		6,778		6,125	12,903
1890-91		5,088	4,670	8,215	17,973		10,130	468	5,096	16,594
1891-92		7,142	3,960	10,535	21,637		12,633	7,647	12,414	32,721
1892-93				10,137	10,137		8,327	6,456	7,840	22,623
1893-94				6,775	6,775		17,729	6,967	8,885	33,581
1894-95				10,342	10,342		13,351	15,819	4,695	33,865
1895-96				9,824	9,824		15,138	13,734	11,309	40,181
1896-97				4,925	4,925		5,694	8,069	6,957	20,720
1897-98							6,624	8,821	10,989	26,534
1898-99							8,138	2,183	15,833	26,164
1899-1900		96			96		9,795	257	19,655	29,907
1900-01		489			489	403	14,791	12	10,615	25,821
1901-02		90		11,533	11,643	3,101	9,831	861	18,839	29,632
1902-03		194		17,137	17,331	3,183	5,763	1,636	20,529	31,111
1903-04	357	875		7,495	8,727	6,013	8,628	879	29,400	44,920
1904-05	602	605	78	1,495	15,684	1,446	7,107	224	23,937	31,764
1905-06		715	68	9,308	10,091	4,235	12,268	176	24,780	41,459
1906-07		394		14,671	15,065	1,998	5,898	2,374	13,927	24,197
1907-08		912		4,371	5,283	5,280	10,555	723	21,073	37,631
1908-09	6	1,705		6,817	8,528	5,095	8,906	979	21,527	36,507
1909-10	309	2,000		12,203	14,512	6,402	9,217	1,051	23,224	39,894
1910-11	532	1,293		24,166	25,991	6,326	9,368	947	25,026	41,667
1911-12	1,096	2,558		12,037	15,711	8,242	9,691	1,519	21,870	41,322
1912-13	1,380	14,030			15,410	8,678	9,640	1,422	23,684	43,424
1913-14	1,419	1,852		9,806	13,077	8,813	8,470	1,609	24,388	43,280

1906-7, nine months only.

SESSIONAL PAPER No. 20

TABLE showing the number of Tons of Fresh and Salt Fish carried over the Inter-colonial railway during each year since 1876.

Year.	Fresh Fish.					Salt Fish.				
	Via Ste. Rosalie.	Via Montreal	Via St. John	To Local Stations	Total.	Via Ste. Rosalie.	Via Montreal	Via St. John	To Local Stations	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1876-77.....		530	921	527	1,978		551	1,848	802	3,201
1877-78.....		506	1,015	474	2,085		898	1,644	805	3,346
1878-79.....		471	1,336	817	2,624		988	1,038	1,048	2,974
1879-80.....		519	1,462	453	2,334		1,612	2,238	959	4,809
1880-81.....		498	1,879	920	3,297		1,418	937	1,051	4,406
1881-82.....		475	1,919	967	3,951		4,031	1,066	2,487	7,584
1882-82.....		542	384	393	1,319		3,229	759	1,354	5,412
1883-84.....		838	1,682	412	2,932		1,322	1,143	1,224	3,689
1884-85.....		1,062	1,885	484	3,431		3,563	3,600	1,596	8,759
1885-86.....		1,669	1,655	902	4,216		1,680	3,047	3,376	7,103
1886-87.....		1,278	1,572	2,008	4,859		3,236	569	1,747	5,552
1887-88.....		1,533	1,477	1,031	4,041		2,617	470	1,099	4,193
1888-89.....		2,474	2,000	1,870	6,344		3,070	7,746	2,994	13,810
1889-90.....		2,335	1,787	2,111	6,223		2,449	847	3,288	6,584
1890-91.....		2,029	2,788	1,848	6,665		1,953	1,917	3,236	7,106
1891-92.....		1,367	1,746	547	3,660		1,946	928	1,889	4,763
1892-93.....		1,683	1,875	3,340	6,898		3,262	1,811	2,176	7,249
1893-94.....		1,959	2,192	2,224	6,375		2,921	1,814	2,962	7,697
1894-95.....		2,006	3,726	1,160	6,892		2,075	1,849	5,285	10,209
1895-96.....		1,966	3,059	1,316	6,344		1,863	1,087	2,791	5,741
1896-97.....		3,307	3,115	1,286	7,708		2,158	1,176	2,536	5,889
1897-98.....		3,575	3,703	1,052	8,330		1,729	1,066	2,210	5,005
1898-99.....		1,210	2,070	3,305	5,583		1,651	1,198	3,625	5,474
1899-1900.....		2,547	2,706	3,686	8,939		2,421	1,563	2,658	6,643
1900-01.....	37	2,009	3,207	4,125	9,393	860	3,416	1,346	4,643	9,768
1901-02.....	219	3,013	4,373	5,477	13,082	283	3,250	1,413	5,196	10,042
1902-03.....	149	2,269	3,040	4,842	10,289	493	2,808	1,615	6,579	11,495
1904-05.....	779	1,939	3,588	5,002	11,068	225	2,359	564	5,848	8,996
1905-06.....	284	2,748	2,439	7,706	13,177	683	2,740	346	6,994	10,763
1906-07.....	320	2,882	3,712	7,400	14,314	307	3,159	416	6,348	10,227
1907-08.....	199	3,288	1,353	6,224	11,064	661	2,856	1,976	7,034	12,527
1908-09.....	312	2,965	2,794	6,946	13,017	668	4,078	1,632	4,866	11,244
1909-10.....	547	3,965	2,616	6,525	14,110	697	3,759	806	6,706	14,868
1910-11.....	1,216	4,300	2,733	6,161	14,110	893	3,590	1,993	9,130	15,546
1911-12.....	1,476	4,213	1,917	6,686	14,292	4,250	4,060	425	10,108	18,843
1912-13.....	1,490	4,572	3,928	7,294	17,284	909	5,795	2,902	8,529	18,135
1913-14.....	2,424	4,424	3,435	9,361	19,744	1,242	5,503	1,657	7,810	16,212

1906 07, nine months only.

WINDSOR BRANCH.

This road is operated by the Dominion Atlantic Railway Company (formerly the Windsor and Annapolis Railway Company), under a lease which covers also running powers over the Intercolonial railway between Windsor Junction and Halifax. The company retains two-thirds of the gross earnings, and the Government receives one-third of the gross earnings, for maintaining the way and works.

Year.	Miles in oper- ation.	One-third gross earnings.	Proportion credited to line Windsor Junction to Halifax.	Proportion credited to the Windsor Branch.	Main- tenance expenses.	Profit.	Loss.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1880-81	32	28,434 29	7,217 76	21,216 53	20,502 26	714 27	
1881-82	32	28,461 07	7,407 88	21,052 19	13,090 55	7,953 64	
1882-83	32	31,199 77	8,095 88	24,113 89	23,103 93	1,009 96	
1883-84	32	30,428 39	7,409 46	23,018 93	22,140 86	878 07	
1884-85	32	32,246 30	7,794 95	24,451 35	18,751 96	5,699 39	
1885-86	32	31,185 63	7,527 52	23,658 11	19,229 49	4,428 62	
1886-87	32	33,564 58	8,237 00	25,327 58	26,042 33		714 75
1887-88	32	32,242 85	6,689 30	24,553 55	24,040 33	513 22	
1888-89	32	37,313 43	8,941 32	28,372 11	20,856 50	7,515 61	
1889-90	32	39,544 19	9,381 73	30,162 46	18,982 82	11,179 64	
1890-91	32	39,519 56	9,284 48	38,508 35	28,931 71	1,308 42	
1891-92	32	42,391 23	9,382 38	30,235 13	19,514 37	13,994 48	
1892-93	32	43,901 28	9,585 17	34,316 11	16,889 95	17,426 16	
1893-94	32	41,834 70	8,859 23	32,475 47	17,645 09	15,330 38	
1894-95	32	50,703 84	11,626 20	39,077 64	14,640 07	24,437 57	
1895-96	32	47,456 74	10,894 91	36,561 83	16,476 46	20,985 37	
1896-97	32	54,208 81	13,605 58	40,603 23	10,821 04	29,782 19	
1897-98	32	48,892 21	11,665 57	37,226 64	18,181 09	14,045 01	
1898-99	32	56,314 51	13,840 48	42,474 04	12,873 06	29,600 94	
1899-1900	32	62,266 61	14,925 18	47,351 43	12,891 56	34,459 87	
1900-01	32	62,523 20	15,261 31	47,261 89	16,862 66	30,395 23	
1901-02	32	65,315 38	15,710 79	49,604 59	16,376 27	33,228 32	
1902-03	32	56,417 38	13,856 57	42,560 81	17,843 19	24,717 62	
1903-04	32	72,708 54	19,074 49	53,634 05	24,281 08	29,352 96	
1904-05	32	66,798 46	16,759 79	50,038 67	26,863 16	23,175 51	
1905-06	32	65,936 66	16,484 16	49,452 50	17,485 97	31,966 53	
1906-07	32	61,597 30	16,156 78	45,440 52	15,425 32	30,015 20	
1907-08	32	76,471 58	20,041 17	56,430 41	37,912 11	18,518 20	
1908-09	32	75,781 80	19,750 47	56,031 33	36,234 55	19,796 78	
1909-10	32	81,861 73	21,207 75	60,653 98	23,549 90	37,104 08	
1910-11	32	64,781 89	16,590 46	48,191 43	17,797 98	30,393 45	
1911-12	32	99,996 10	26,819 50	73,176 60	33,854 05	39,322 55	
1912-13	32	93,235 40	24,988 70	68,246 70	29,970 62	38,276 08	
1913-14	32	85,277 77	23,710 25	61,517 52	26,486 98	35,030 54	

1906-07—nine months only.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

The following table shows the working expenses, the gross and net earnings, the tons of freight and number of persons carried each year since June 30, 1875, when the road was first opened for traffic:—

Year.	Miles in operation.	Working expenses.	Gross earnings.	Loss.	Tons of freight carried.	No. of passengers carried.
		\$ cts.	\$ cts.	\$ cts.		
1875-76	199	214,930 43	118,060 96	96,869 47	28,358	93,964
1876-77	199	228,595 25	130,664 92	97,930 33	41,039	93,478
1877-78	199	221,599 46	135,899 60	85,699 89	38,668	111,428
1878-79	199	223,313 12	125,855 99	97,457 21	38,923	105,046
1879-80	199	164,640 55	113,851 11	50,789 44	37,208	90,533
1880-81	199	228,259 97	137,267 54	90,922 43	48,315	118,436
1881-82	199	252,808 41	146,170 42	106,637 99	51,920	117,162
1882-83	199	236,428 13	144,504 12	91,924 01	51,841	118,988
1883-84	211	211,207 01	158,588 06	52,618 95	57,346	130,423
1884-85	211	216,744 34	155,584 36	61,159 98	57,913	120,374
1885-86	211	204,237 37	155,303 37	48,934 00	63,589	103,067
1886-87	211	229,639 95	158,365 62	71,276 33	59,603	131,246
1887-88	211	247,559 44	171,369 56	76,189 89	55,682	152,780
1888-89	211	266,485 85	160,971 78	105,524 07	52,604	133,099
1889-90	211	257,990 08	174,258 05	83,732 03	59,511	145,508
1890-91	211	289,706 38	157,442 69	132,263 69	51,065	139,389
1891-92	211	226,422 17	162,690 42	63,731 75	56,718	132,111
1893-94	211	226,891 06	158,533 83	68,857 23	53,577	123,727
1894-95	211	232,105 19	149,654 71	83,250 41	48,325	125,089
1895-96	211	225,138 56	146,476 54	78,662 02	46,395	122,586
1896-97	211	240,489 90	153,443 13	87,046 77	52,151	131,498
1897-98	211	231,418 74	158,950 61	72,468 13	57,539	156,510
1898-99	211	218,053 01	165,021 03	53,040 98	57,968	129,667
1899-1900	211	220,931 81	174,758 73	46,193 08	62,227	147,471
1900-01	211	261,766 24	193,833 48	67,883 76	73,696	157,793
1901-02	210	270,159 97	197,999 97	72,160 00	74,381	184,748
1902-03	209	260,737 82	217,714 24	41,923 58	80,582	205,265
1903-04	209	335,695 44	234,390 03	101,305 41	86,286	224,517
1904-05	209	370,464 44	217,330 61	153,133 83	75,969	235,194
1905-06	261	294,253 16	257,270 57	36,982 59	87,162	371,092
1906-07	267	282,148 50	215,534 97	67,713 53	67,144	232,256
1907-08	267	309,947 79	304,579 83	95,367 96	97,250	317,828
1908-09	267 5	400,330 00	311,319 63	69,010 78	106,090	332,758
1909-10	267 5	427,283 73	319,074 74	108,208 99	105,741	251,038
1910-11	267 5	424,104 00	337,419 55	86,684 45	108,263	356,761
1911-12	267 5	449,962 91	367,203 39	82,759 52	120,218	388,076
1912-13	267 5	489,972 34	389,474 07	100,498 27	122,784	433,888
1913-14	275 2	571,415 37	409,616 74	161,798 63	115,751	445,739

1906-7, nine months only.

5 GEORGE V., A. 1915

CANALS.

STATEMENT showing the total cost of construction of the individual Dominion canal works and connecting waters, up to March 31, 1914.

Route from Montreal to Lake Superior.

	Original Construction.	Enlargement of Canals.	Improvements to St. Lawrence River and Lakes.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Lachine Canal.....	2,589,532 85	11,173,882 04		13,763,414 89
Lake St. Louis.....			298,176 11	298,176 11
Soulanges Canal.....	7,777,675 02			7,777,675 02
Beauharnois Canal.....	1,636,690 26			1,636,690 26
Lake St. Francis.....			75,906 71	75,906 71
Cornwall Canal.....	1,915,624 73	5,297,179 48		7,242,804 21
Williamsburg Canal.....	1,320,655 54	13,896 26		1,334,551 80
Farrans Point Canal.....		877,090 57		877,090 57
Rapide Plat Canal.....		2,158,242 00		2,158,242 00
Galops Canal.....		6,121,213 70		6,121,213 70
Galops Rapids.....			1,039,895 65	1,039,895 65
St. Lawrence River and reaches.....			711,238 93	711,238 93
North Channel.....			1,718,778 83	1,718,778 83
Murray Canal.....	1,248,946 71			1,248,946 71
Welland Canal.....	7,693,824 03	21,749,473 88		29,443,297 91
Sault Ste. Marie Canal.....	4,994,372 51			4,994,372 51
Totals.....	29,207,321 65	47,390,977 93	3,843,996 23	80,442,295 81

Route from Lachine to Ottawa.

	Original Construction.	Enlargement.	Total.
	\$ cts.	\$ cts.	\$ cts.
Ste. Anne's Lock.....	134,456 51	1,035,759 12	1,170,215 63
Carillon and Grenville Canals.....	63,053 64	4,119,039 32	4,182,092 96
Culbute Canal (superseded).....	382,391 46		382,391 46
Total	579,901 61	5,154,798 44	5,734,700 05

Construction by the Imperial Government is not included. Records relating to same were kept in Ordnance Office, Montreal, and were destroyed by fire in 1852.

Route from Ottawa to Kingston.

	Original Construction.	Enlargement.	Total.
	\$ cts.	\$ cts.	\$ cts.
Rideau Canal.....	4,084,323 37	83,130 84	4,167,454 21
Tay Canal.....	489,599 23		489,599 23
Total	4,573,922 60	83,130 84	4,657,053 44

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Route from St. Johns, P.Q., to Sorel.

	Original Construction.	Enlargement.	Total.
	\$ cts.	\$ cts.	\$ cts.
Chambly Canal.....	637,056 76	94,639 76	731,696 52
St. Ours Lock.....	121,537 65	5,690 91	127,228 56
Total.....	758,594 41	100,330 67	858,925 08

Route from Lake Ontario to Georgian Bay.

	Original Construction.	Enlargement.	Total.
	\$ cts.	\$ cts.	\$ cts.
Trent Canal.....	13,611,034 95	.....	13,611,034 95
Total ..	13,611,034 95	.....	13,611,034 95

Route from Atlantic Ocean to Bras d'Or Lakes.

	Original Construction.	Enlargement.	Total.
	\$ cts.	\$ cts.	\$ cts.
St. Peter's Canal—Cape Breton	248,762 84	399,784 30	648,547 14
Total.....	248,762 84	399,784 30	648,547 14

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COMPARATIVE STATEMENT of Tons of Freight which passed through the canals in seasons of 1912 and 1913.

Name of Canal.	Season of 1913.	Season of 1912	Number of trips of vessels.	
			Season of 1913.	Season of 1912.
	Tons.	Tons.		
Sault Ste. Marie.....	42,699,324	39,669,655	8,285	7,856
Welland.....	3,570,714	2,851,915	3,229	2,965
St. Lawrence.....	4,302,427	3,477,188	11,656	11,066
Chambly.....	555,602	618,415	3,197	3,705
St. Peter's.....	71,514	74,809	1,387	1,213
Murray.....	180,576	170,081	1,277	1,085
Ottawa.....	365,438	392,350	2,938	3,059
Rideau.....	171,223	160,133	2,820	2,969
Trent.....	55,800	77,150	3,666	3,998
St. Andrew's*.....	81,295	95,549	988	1,260
Total.....	52,053,913	47,587,245	39,393	39,056

*This is a lock and dam on the Red River, between Winnipeg and Lake Winnipeg, built and operated by the Department of Public Works.

TABLE showing the dates of opening and closing of the canals for the season of 1913.

	Navigation Opened 1913.	Navigation Closed 1913.
Lachine.....	April 22.....	December 8
Soulanges.....	" 24.....	" 7
Grenville.....	" 22.....	November 30
Carillon.....	" 22.....	" 30
Ste. Anne's.....	" 22.....	December 4
Chambly.....	" 22.....	" 1
St. Ours.....	" 15.....	November 30
Cornwall.....	" 16.....	December 13
Williamsburg. {	Farrans Point.....	" 16
	Rapide Plat.....	" 16
	Galops.....	" 16
Murray.....	" 10.....	" 10
Welland.....	" 15.....	" 18
Sault Ste. Marie.....	" 13.....	" 14
Rideau..... {	At Ottawa.....	May 1.....
	At Kingston.....	" 1.....
	Hastings to Rice Lake.....	June 9.....
	Rice Lake to Peterborough.....	May 3.....
	Peterborough to Lakefield.....	" 20.....
Trent..... {	Peterborough Lift Lock.....	" 20.....
	Lakefield to Bobcaygeon.....	April 26.....
	Bobcaygeon to Rosedale.....	May 25.....
	Balsam Lake to Lake Simcoe.....	" 1.....
	Kirkfield Lift Lock.....	" 1.....
St. Peter's..... {	Lake Simcoe to Orillia.....	" 1.....
	.....	April 7.....

January 9, 1914.

PART IX

ACTS AUTHORIZING RAILWAY SUBSIDIES

IN FORCE MARCH 31, 1914



9-10 EDWARD VII.

CHAP. 51.

An Act to authorize the granting of subsidies in aid of the construction of the lines of railway therein mentioned.

[Assented to 4th May, 1910.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. The Governor in Council may grant a subsidy of \$3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than \$15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway, not exceeding the mileage hereinafter stated, which shall cost more on the average than \$15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of \$3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of \$15,000 per mile, such subsidy not exceeding in the whole the sum of \$6,400 per mile.—

Subsidies for
railways.

1. For a line of railway from Tusket Wedge to a point on the Halifax and South Western Railway at or near Riverdale station, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 27; not exceeding 8 miles.

2. To the Halifax and South Western Railway Company, for a line of railway from Lunenburg to Bridgewater via Upper La Have, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 28; not exceeding 12 miles.

3. To the Inverness Railway and Coal Company, for a line of railway from Cheticamp to a point on the line already built between Broad Cove and Point Tupper, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 17; not exceeding 37 miles.

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4. To the Margaree Coal and Railway Company, for a line of railway from a point at or near Orangedale, on the Intercolonial Railway, thence by the east side of Lake Ainslie and Ste. Rosa, to Chimney Corner Cove, not exceeding 46 miles; and for a line of railway from a point on the Intercolonial Railway between Orangedale and Point Tupper to Caribou Cove on Inhabitants Bay or River, not exceeding 4 miles; in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 18; not exceeding in all 50 miles.

5. For a line of railway from a point on the Dominion Atlantic Railway to the Government pier or wharf at Canning, in lieu of the subsidy granted by chapter 40 of 1907, section 1, item 7; not exceeding 1 mile.

6. For a line of railway from Brazil Lake on the Dominion Atlantic Railway to Kemptville, Nova Scotia, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 16; not exceeding 11 miles.

7. To the Dominion Atlantic Railway Company, for a line of railway from Centreville on the Dominion Atlantic Railway, westerly to Weston, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 30; not exceeding 15 miles.

8. For a line of railway from a point on the Intercolonial Railway at or near Dartmouth, in the county of Halifax, to a point at or near Deans Settlement, in the county of Halifax, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 21; not exceeding 80 miles.

9. For a line of railway from a point at or near Deans settlement, in the county of Halifax, to a point at or near Melrose, in the county of Guysborough, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 22; not exceeding 52 miles.

10. For a line of railway from a point at or near New Glasgow, in the county of Pictou, to a point at or near Melrose, in the county of Guysborough, and from the said point at or near Melrose to Guysborough, in the county of Guysborough, with a branch line to Country Harbour, in the county of Guysborough, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 23; not exceeding in all 116 miles.

11. To the International Railway Company of New Brunswick, for $3\frac{1}{2}$ miles of its railway, being the distance which the subsidy granted by chapter 63 of 1908, section 1, item 15, is short of covering.

12. For a line of railway from Grand Falls to St. John, New Brunswick, in lieu of the subsidies granted by chapter 40 of 1907, section 1, items 2, 3 and 10, respectively, and in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 69; not exceeding 228 miles.

13. For a line of railway from Connors, at the terminus of the Temiscouata Railway, to a point on the boundary line between New Brunswick and Quebec, at the foot of Beau Lake, in lieu

of

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of the subsidy granted by chapter 40 of 1907, section 1, item 25; not exceeding 18 miles.

14. To the York and Carleton Railway Company, for a line of railway from its present terminus to a point on the National Transcontinental Railway, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 33; not exceeding 9 miles.

15. For a line of railway from a point on the Canadian Pacific Railway at or near Plaster Rock to Riley Brook, in lieu of the subsidy granted by chapter 63, of 1908, section 1, item 31; not exceeding 28 miles.

16. To the Atlantic, Quebec and Western Railway Company, for a line of railway from Paspebiac to Gaspé, as near the shore as practicable, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 9, for a line between the points above mentioned; not exceeding 102 miles.

17. To the Canadian Northern Quebec Railway Company, for a line of railway from a point at or near Arundel to a point in the municipality of the united townships of Preston and Hartwell, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 11, for a line of railway between the points above mentioned; not exceeding 30 miles.

18. For a line of railway from Roberval westward towards James Bay, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 9; not exceeding 100 miles.

19. To the Quebec and Lake St John Railway Company, for the following lines of railway:—

(a) from Valcartier station to St. Catherine, not exceeding 3·8 miles;

(b) from Valcartier station towards Gosford, not exceeding 5½ miles;

(c) from the end of the 35th mile of the branch to La Tuque, on the River St. Maurice, to La Tuque Falls, not exceeding 5 miles;

(d) from La Tuque Falls to the mouth of the River Croche, not exceeding 5 miles;

(e) from a point on the La Tuque branch to the steamboat landing near La Tuque, not exceeding 1·6 miles;

(f) from Herbertville to St. Joseph d'Alma; not exceeding 10 miles;

(g) from Chicoutimi south or southeast; not exceeding 5 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 63 of 1908, section 1, items 43, 44 and 72, respectively; not exceeding 35·9 miles.

20. To the Quebec and New Brunswick Railway Company, for a line of railway from Chaudière Junction to a point at or near the International boundary, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 25; not exceeding 62 miles.

21. To the Eastern Townships Railway Company, for a line of railway from the Intercolonial Railway at St. Leonard's

Junction

Junction to Dudswell, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 41; not exceeding 36 miles.

22. To the L'Avenir and Melbourne Railway Company for a line of railway from Melbourne to Drummondville, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 71; not exceeding 28 miles.

23. To the Lotbinière and Megantic Railway Company, for a line of railway to extend its railway southerly from a point at or near Lyster, in Megantic county, to or towards a point at or near Lime Ridge, in the township of Dudswell, not exceeding 50 miles; and for a line of railway from a point on its line in the township of Inverness, to a point at or near the bridge over the St. Lawrence River at or near Quebec; not exceeding 30 miles; in lieu of the subsidies granted by chapter 63 of 1908, section 1, item 19; not exceeding in all 80 miles.

24. For a line of railway from Joliette to or near Lake Manuan, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 9, not exceeding 60 miles.

25. For a line of railway from St. Joachim towards Seven Islands, including branches to Murray Bay and Baie St. Paul, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 11; not exceeding 170 miles.

26. For a line of railway from a point at or near Ste. Agathe des Monts station towards the township of Howard, in the county of Argenteuil, passing near Lake St. Joseph and St. Mary in a southerly direction, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 26; not exceeding 15 miles.

27. To the Ha Ha Bay Railway Company, for a line of railway from a point at or near Jonquières village to Baie des Ha Ha, via Laterrière village, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 24; not exceeding 24 miles.

28. To the St. Mary's and Western Ontario Railway Company, for a line of railway from Embro to Exeter, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 60; not exceeding 36 miles.

29. To the Manitoulin and North Shore Railway Company for the following lines of railway:—

(a) from a point on the said company's line of railway between Little Current and Sudbury, westerly towards the Algoma Central and Hudson Bay Railway; not exceeding 76 miles;

(b) from Little Current thence crossing the Canadian Pacific Railway, at or near Stanley, and thence to Sudbury; not exceeding 88 miles;

(c) from a point at or near Sudbury, northerly, not exceeding 30 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 63 of 1908, section 1, item 51; not exceeding in all 194 miles.

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30. To the Algoma Central and Hudson Bay Railway Company for the following lines of railway:—

- (a) from Sault Ste. Marie to a point on the Canadian Pacific Railway between White River and Dalton stations in the district of Algoma, not exceeding 200 miles;
- (b) from Michipicoten Harbour, Lake Superior, towards the main line of the Canadian Pacific Railway, not exceeding 25 miles;
- (c) from a point on the Canadian Pacific Railway, northerly, towards the National Transcontinental Railway, not exceeding 50 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 43 of 1906, section 1, item 2, and chapter 63 of 1908, section 1, item 61; not exceeding in all 275 miles.

31. To the Bracebridge and Trading Lake Railway Company, for a line of railway from Bracebridge, in Muskoka, to a point at or near Baysville, Ontario, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 8; not exceeding 16 miles.

32. To the Lac Seul, Rat Portage and Keewatin Railway Company, for a line of railway from a point at or near Kenora to the National Transcontinental Railway, in lieu of subsidy granted by chapter 63 of 1908, section 1, item 63, for 18 miles; not exceeding 22 miles.

33. To the Canadian Northern Quebec Railway Company, for a line of railway from Montreal to Hawkesbury, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 48; not exceeding 65 miles.

34. To the Nipigon Railway Company for the following lines of railway:—

- (a) from a point at or near Nipigon station on the line of the Canadian Pacific Railway to Nipigon Lake; not exceeding 30 miles;
- (b) from a point on Nipigon Bay of Lake Superior to a point on the west of Lake Helen on the line of the Nipigon Railway; not exceeding $3\frac{1}{2}$ miles;
- (c) from a point on the line of the Nipigon Railway at or near the crossing of the French River to a point on Lake Jesse, by way of Cameron's Falls; not exceeding $1\frac{1}{2}$ miles;
- (d) from a point on the north shore of Lake Nipigon, northerly; not exceeding 45 miles.

the said subsidies being granted in lieu of the subsidies granted by chapter 63 of 1908, section 1, item 4: not exceeding in all 80 miles.

35. To the Ontario, Northern and Timagami Railway Company, for a line of railway from a point at or near Sturgeon Falls, in a northwesterly direction, to a point on the westerly shore of Lake Timagami, in the district of Nipissing, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 6; not exceeding 50 miles.

36. For a line of railway from Sharbot Lake or Bathurst station, in the province of Ontario, or between these points, via
Lanark

Lanark village, to Carleton Place, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 3; not exceeding 41 miles.

37. To the Erie, London and Tillsonburg Railway Company, for a line of railway from Port Burwell to London, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 29; not exceeding 35 miles.

38. To the Toronto, Lindsay and Pembroke Railway Company, for a line of railway from Golden Lake to Bancroft, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 41; not exceeding 51 miles.

39. To the Kingston, Smith's Falls and Ottawa Railway Company, for a line of railway from Kingston to Ottawa, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 19; not exceeding 101 miles.

40. To the Pacific, Northern and Omineca Railway Company, for a line of railway from Edmonton, northwesterly, to or towards the Peace River, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 51; not exceeding 110 miles.

41. To the Southern Central Pacific Railway Company, for the following lines of railway:—

(a) from a point two miles west of Pincher station on the Crow's Nest Pass branch of the Canadian Pacific Railway, northeasterly; not exceeding 10 miles;

(b) from a point two miles west of Pincher station on the Crow's Nest Pass branch of the Canadian Pacific Railway, southwesterly; not exceeding 40 miles;

the said subsidies being granted in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 37; not exceeding in all 50 miles.

42. To the Kettle River Valley Railway Company, for the following lines of railway:—

(a) from Midway to a junction near Merritt with the Nicola, Kamloops and Similkameen Railway; not exceeding 250 miles;

(b) from a point on the Company's line of railway near Coldwater River to a point on the Fraser River; not exceeding 50 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 40 of 1907, section 1, item 18, and chapter 63 of 1908, section 1, items 58 and 59, respectively; not exceeding in all 300 miles.

43. To the Kootenay Central Railway Company, for a line of railway from Golden towards the International boundary via Windermere and Fort Steele, thence crossing the Crow's Nest Pass Railway, at or near Elko; in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 31; not exceeding 186 miles.

44. To the Esquimalt and Nanaimo Railway Company, for a line of railway from a point on its main line of railway, at or near Duncan's to Cowichan Lake, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 67; not exceeding 24 miles.

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45. For a line of railway from Montreal to a point on the National Transcontinental Railway, in lieu of subsidy granted by chapter 63 of 1908, section 1, item 49; not exceeding 200 miles.

46. To the Little Nation River Railway Company, for a line of railway from Papineauville, on the Canadian Pacific Railway, towards Lake Nominig, in lieu of subsidy granted by chapter 63 of 1908, section 1, item 70; not exceeding 30 miles.

2. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and shall include the amount expended upon any bridge, up to and not exceeding \$25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway nor the cost of terminals nor the cost of right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the chief engineer of the Department of Railways and Canals, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway. ^{defined.}

3. The subsidies hereby authorized towards the construction of any railway shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:— ^{How subsidies shall be paid.}

(a) Upon completion of the work subsidized; or,

(b) By instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; or,

(c) Upon the progress estimates on the certificate of the chief engineer of the Department of Railways and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars; or,

(d) With respect to (b) and (c), part one way, part the other.

4. The subsidies hereinbefore authorized to be granted to companies named shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already ^{Conditions.}

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already commenced, shall be commenced within two years from the first day of August, 1910, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines shall be subject to the approval of the Governor in Council.

As to running
powers.

5. The granting of such subsidies and the receipt thereof by the respective companies shall be subject to the condition that the Board of Railway Commissioners for Canada may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with the railway so subsidized reasonable and proper facilities in exercising such running power, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways hereby subsidized: Provided always that any decision of the said Board made under this section may be at any time varied, changed or rescinded by the Governor in Council, as he deems just and proper.

Proviso.

Transporta-
tion of
Government
supplies, etc.

6. Every company receiving a subsidy under this Act, its successors and assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the lines in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the department of the Government for which such service is being performed and the company performing it, and, in case of disagreement, then at such rates as are approved by the Board of Railway Commissioners for Canada; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of the subsidy received by the company under this Act.

Production
of accounts.

7. As respects all railways for which subsidies are granted by this Act, the company at any time owning or operating
any

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any of the railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

8. The Governor in Council may make it a condition of the grant of the subsidies herein provided that the company shall lay the railway with new steel rails and fastenings made in Canada and shall purchase all materials and supplies required for the construction of the railway, and the rolling stock for the first equipment of the railway, from Canadian producers, if such rails, fastenings, materials, supplies and equipment are procurable in Canada of suitable quality and upon terms as favourable as elsewhere, of which the Minister of Railways and Canals shall be the judge.

As to
Canadian
steel rails.

9. Whenever a contract has been duly entered into with a company for the construction of any line of railway hereby subsidized, the Minister of Railways and Canals, at the request of the company, and upon the report of the chief engineer of the Department of Railways and Canals, and his certificate that he has made careful examination of the surveys, plans and profile of the whole line so contracted for, and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the reasonable and probable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the chief engineer, and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of \$3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said \$3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the Governor in Council upon the recommendation of the Minister of Railways and Canals, and upon the report and certificate of the said chief engineer, entitles the company thereto: Provided always—

Mode of
payment of
certain
railway
subsidies.

Proviso.

(a) that the estimated cost, as certified, is not less on the average than \$18,000 per mile for the whole mileage subsidized;

(b) that no payment shall be made except upon a certificate of the chief engineer that the work done is up to the standard specified in the company's contract;

(c) that in no case shall the subsidy exceed the sum of \$6,400 per mile.



2 GEORGE V.

CHAP. 7.

An Act to aid the construction of the Canadian Northern Alberta Railway.

[Assented to 1st April, 1912.]

WHEREAS, by chapter 6 of the statutes of 1910, authority Preamble.
 was given to the Governor in Council to aid and assist the construction of the line of railway of the Canadian Northern Alberta Railway Company, hereinafter called "the Company," by guaranteeing the principal and interest of the bonds, debentures, debenture stock or other securities of the Company to the extent of thirteen thousand dollars per mile for the first fifty miles of the line so aided, and for the remainder of the said line to an amount of twenty-five thousand dollars per mile, not exceeding in all one hundred and fifty miles, as in the said Act set out, and the Governor in Council, pursuant to the said authority, has granted such aid accordingly; and whereas the Company has authority, under the said Act, to construct and operate a line of railway from a point at or near Edmonton or Strathcona to a point in the province of British Columbia in or near the Yellowhead Pass, and fifty miles west of the boundary of the said province: Therefore His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Canadian Northern Alberta Railway Aid Act, 1912.* Short title.

2. His Majesty on behalf of the Dominion of Canada, hereinafter called "the Dominion," may aid and assist the construction and completion of a line of railway of the Company extending from a point on the line of the railway Aid authorized.

of the Company one hundred and fifty miles westerly from St. Albert, thence in a westerly direction to the boundary of the province of British Columbia at or in the Yellowhead Pass, for a distance not exceeding one hundred and fifteen miles, by guaranteeing the principal and interest of the bonds, debentures, debenture stocks and other securities, hereinafter called "securities," secured as hereinafter mentioned, of the Company, to the extent of thirty-five thousand dollars per mile of the said line of railway so aided, not exceeding in all one hundred and fifteen miles; the interest upon the said securities to be paid at the rate of three and one-half per cent per annum, payable half yearly, the principal to be payable in fifty years from the passing of this Act.

3. The said securities so guaranteed shall be secured by a deed or deeds of trust by way of mortgage or charge to a trustee or trustees, approved of by the Governor in Council, and such deed or deeds of trust shall respectively grant a first mortgage or charge upon the said line of railway so aided, and the right of way, station grounds, or other real estate and interest therein, buildings and other structures and improvements, rolling stock and equipment, plant, machinery, tools, supplies, materials and other personal properties, present and future, acquired for the purposes of the said line so aided, and in connection with operating, repairing and maintaining it, and the tolls, incomes and revenues of the Company arising and to arise from the said line, and the rights, privileges, franchises and powers of the Company now or hereafter held with respect to and in connection with the said line and the operation, maintenance and repair thereof.

4. The kind of securities to be guaranteed as aforesaid, and the forms thereof, and the form and terms of the deed or deeds of trust securing them, and the times and manner of the issue of securities and the disposition of the moneys to be raised thereon by sale, pledge or otherwise, pending the expenditure of such moneys for the purposes of the line of railway so aided, and the forms and manner of guarantee, shall be such as the Governor in Council approves, and such terms, provisions and conditions may be included in such deed or deeds of trust as the Governor in Council deems expedient or necessary.

5. The said guarantee shall be signed by the Minister of Finance, or such officer as is designated by the Governor in Council to sign it; and upon being so signed the Dominion shall become liable as guarantor for the payment of the principal and interest of the securities so guaranteed, according

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according to the tenor thereof, and the said payment shall form a charge upon the Consolidated Revenue Fund.

6. Any moneys paid by the Dominion under any guarantee herein provided for shall be held to be paid in discharge of the liability of the Dominion and not in discharge of the liability of the Company under the securities so guaranteed, or under any deed of trust securing them, and the moneys so paid shall be held to be still secured by the said securities and deed of trust, and the Dominion shall be subrogated in and to all the rights of the holders of such securities, the interest upon or the principal of which has been paid by the Dominion, and the Dominion shall, with respect to all moneys so paid, be in all respects in the position of security holders with respect to whose securities default has been made in payment to the extent of the moneys paid by the Dominion.

Liability of Dominion discharge.l by payments

7. The decision of the Governor in Council as to the length of the mileage of the said line of railway so to be aided shall, for the purposes of this Act, be final.

Length of lines.

8. The books of the Company shall at all times be open for inspection for and on behalf of the Dominion by any person named in that behalf by the Governor in Council or the Minister of Finance.

Inspection of books.

9. The Canadian Northern Railway Company shall, by guarantee included in the said deed or deeds of trust, or in some other instrument agreed to by the Governor in Council or the Minister of Finance and the last named company, in such form as the Governor in Council approves, guarantee to the Dominion the due payment by the Company of the principal and interest of all securities issued and guaranteed under the provisions of this Act, according to the tenor and effect of such securities respectively, and in accordance with the terms of the said deed or deeds of trust, and shall also guarantee to the Dominion the due payment by the Company of all loss or costs which the Dominion may sustain or be put to in enforcing, after default, the provisions of the said deed or deeds of trust against the line of railway and premises thereby mortgaged and charged.

Guarantee by Canadian Northern Railway.

Principal and interest.

Costs of default.

10. The line hereby aided, as set forth or described in section 2 of this Act, shall be constructed and completed according to the following specifications:—

Standard of construction.

Bridges over rivers and large streams are to be of concrete and steel construction and to be built to the classification of the Heavy Standard Specification of the Department of Railways and Canals, dated one thousand nine hundred and eight.

Bridges.

Bridges

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- Trestles. Bridges of pile or frame trestle may be constructed over small streams which can be taken care of by culverts, such culverts to be constructed within a reasonable time after the line is put in operation, of which time the Governor in Council shall be the sole judge.
- Culverts.
- Rails. The line of railway shall be laid with steel rails, not less than eighty pounds to the lineal yard, with standard fastenings.
- Curves and grades. The maximum curvature shall not be of less radius than seven hundred and sixteen feet, and the grades against east bound traffic shall not exceed five-tenths of one per cent, or 26·40 feet per mile; or six-tenths of one per cent, or 31·68 feet per mile, against west-bound traffic; provided that under exceptional conditions, with the consent of the Governor in Council, less radius of curvature and heavier grades may be allowed, on the recommendation of the chief engineer of the Department of Railways and Canals, approved by the Minister of Railways and Canals, but in no case shall the curvature exceed five hundred and seventy-three feet radius, or the gradients exceed 52·80 feet to the mile.



2 GEORGE V.

CHAP. 8.

An Act respecting aid toward the construction of the Canadian Northern Alberta Railway.

[Assented to 1st April, 1912.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Canadian Northern Alberta Railway Act, 1912.* Short title.

2. The aid and assistance which, under *The Canadian Northern Alberta Railway Act, 1910*, (hereinafter called "the said Act"), the Governor in Council was authorized to give to the Canadian Northern Alberta Railway Company (hereinafter called "the Company") in respect of the construction of the one hundred and fifty miles of the line of railway therein described (hereinafter called "the old line") may, notwithstanding anything in the said Act, be applied to the first one hundred and fifty miles of the Company's line of railway at present constructed or located running from St. Albert, in the province of Alberta, in a generally westerly direction toward the Yellowhead Pass, such last mentioned one hundred and fifty miles being herein referred to as "the new line." Aid to company may be applied to new line.

3. The Governor in Council may cause to be executed by the Minister of Finance, or such other officer as the Governor in Council may designate, an instrument, in form approved by the Governor in Council, supplementary to the deed of trust, by way of mortgage or charge, made under the authority of the said Act and dated the twenty-second

Execution of mortgage

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day of March one thousand nine hundred and eleven, (herein called the original mortgage), for the purpose of giving effect to the provisions of this Act.

Securities
already issued
to be a
charge on
new line.

1. Upon the execution of such instrument by the Company and the Minister of Finance, or the other person as aforementioned, the securities issued under the original mortgage shall form a charge upon the new line instead of upon the old line, and the proceeds of the guaranteed securities issued under the original mortgage shall thereupon be applied in and toward the construction of the new line.

Trustees
to execute.

5. The trustees of the original mortgage shall concur with the Company and the Governor in Council in executing, or causing to be executed, the supplementary instrument aforementioned.

Amendment
of contract
for construction.

6. Upon the passing of this Act the contract made between His Majesty the King and the Company, dated the second day of September, one thousand nine hundred and eleven, in respect of the construction of the line of railway aided under the said Act may be amended by the parties thereto so as to provide for the construction and completion of the new line instead of the line therein mentioned, and the several parties to the said contract and to the original mortgage are hereby authorized and empowered to execute the several documents and make the several amendments necessary to carry into effect the intent of this Act.



2 GEORGE V.

CHAP. 9.

An Act to authorize the granting of a Subsidy to the Canadian Northern Pacific Railway Company in aid of the construction of the railway therein mentioned.

[Assented to 1st April, 1912.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Canadian Northern Pacific Railway Aid Act*. Short title.

2. The Governor in Council may grant a subsidy of twelve thousand dollars per mile to the Canadian Northern Pacific Railway Company towards the construction of a railway from a point at Yellowhead Pass to Vancouver and the mouth of the Fraser river, not exceeding five hundred and twenty-five miles. Subsidy authorized.

3. The said subsidy shall be payable out of the Consolidated Revenue Fund of Canada and may, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:— Manner and conditions of payment.

- (a) upon the completion of the work subsidized; or,
- (b) by instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; the cost for the purposes of this paragraph to be determined by the Governor in Council; or,
- (c) upon the progress estimates on the certificate of the chief engineer of the Department of Railways

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and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars; or,

(d) with respect to (b) and (c), part one way part the other.

Time for
construction
limited.

Contract for
construction.

Location.

Transporta-
tion of
Government
supplies, etc.

4. The said railway, unless already commenced, shall be commenced within two years from the first day of August, nineteen hundred and twelve, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in a contract between the said Company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location of the said railway shall be subject to the approval of the Governor in Council.

5. The said Company, its successors and assigns, and any person or company controlling or operating the said railway or portion thereof, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the railway in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the Department of the Government for which such service is being performed and the company performing it, and in case of disagreement then at such rates as are approved by the Board of Railway Commissioners for Canada; and in or towards payment for such charges the Government of Canada shall be credited by the said Company with a sum equal to three per cent per annum on the amount of the subsidy received by the Company under this Act.

Production
of accounts.

6. As respects the railway for which such subsidy is granted the Company at any time owning or operating it shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers, showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

Canadian
steel rails,
materials,
and rolling
stock.

7. The Governor in Council may make it a condition of the granting of the subsidy herein provided that the said Company shall lay the railway with new steel rails and fastenings made in Canada, and shall purchase all materials and

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and supplies required for the construction of the railway, and the rolling stock for the first equipment of the railway, from Canadian producers, if such rails, fastenings, materials, supplies and equipment are procurable in Canada of suitable quality and upon terms as favourable as elsewhere, of which the Minister of Railways and Canals shall be the judge.



2 GEORGE V.

CHAP. 48.

An Act to authorize the granting of Subsidies in aid of the construction of the railways and bridges therein mentioned.

[Assented to 1st April, 1912.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Railway Subsidies Act, 1912*. Short title.

2. The Governor in Council may grant a subsidy of \$3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than \$15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway, not exceeding the mileage hereinafter stated, which shall cost more on the average than \$15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of \$3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of \$15,000 per mile, such subsidy not exceeding in the whole the sum of \$6,400 per mile:—

1. For a line of railway from Liverpool, via Milton, to Caledonia, Nova Scotia, in lieu of the subsidy granted by chapter 40 of 1907, section 1, item 5; not exceeding 30 miles.

2. For a line of railway from St. John to Grand Falls, New Brunswick, exclusive of a railway bridge across the
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Kennebecasis

Subsidies
for railways.

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Kennebecasis River, at or near Perry Point, and two railway bridges across the St. John River, one at or near Mistake and one at or near Andover; in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 12; not exceeding 228 miles.

3. To the L'Avenir and Melbourne Railway Company for a line of railway from Melbourne to Drummondville, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 22; not exceeding 28 miles.

4. To the Ha Ha Bay Railway Company for the following lines of railway:—

(a) from a point on the Quebec and Lake St. John Railway in the township of Jonquières, at or near St. Mathias, to Ha Ha Bay; not exceeding 20 miles;

(b) from Labrosse Junction to the Saguenay River, northerly through the town of Chicoutimi; not exceeding 5 miles;

(c) from La Terrière Junction, southerly, to Lake Kenogami, via La Terrière village; not exceeding 12 miles.

(d) from a point on the Ha Ha Bay Railway, at or near Bagotville village, easterly, to the village of St. Alexis; not exceeding 3 miles;

the said subsidies sub-items (a), (c) and (d) being granted in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 27; and the subsidy sub-item (b) being granted in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 19, sub-item (g); not exceeding in all 40 miles.

5. For a line of railway at or near Ste. Agathe des Monts station towards the township of Howard, in the county of Argenteuil, passing near Lake St. Joseph and St. Mary in a southerly direction, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 26; not exceeding 15 miles.

6. To the Interprovincial and James Bay Railway Company, for a line of railway from a point on the Lake Temiscamingue Colonization Railway at or near Timiskaming to or towards the De Quinze River; in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 42; not exceeding 50 miles.

7. To the Canadian Northern Quebec Railway Company, for a line of railway from a point at or near Arundel to a point in the municipality of the united townships of Preston and Hartwell, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 17; not exceeding 30 miles.

8. To the Quebec and Saguenay Railway Company, for the following lines of railway:—

(a) from St. Joachim, northeasterly; not exceeding 62.8 miles;

(b) from a point 62.8 miles northeasterly from St. Joachim towards Seven Islands; not exceeding 107.2 miles;

the

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the said subsidies being granted in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 25; not exceeding in all 170 miles.

9. For a line of railway from a point at or near Montreal to a point at or near Mile 837 west of Moncton on the National Transcontinental Railway, in lieu of subsidy granted by chapter 51 of 1910, section 1, item 45; not exceeding 200 miles.

10. To the Algoma Central and Hudson Bay Railway Company, for the following lines of railway:—

(a) from Sault Ste. Marie to a point on the Canadian Pacific Railway between White River and Dalton stations in the district of Algoma; not exceeding 200 miles;

(b) from Michipicoten Harbour, Lake Superior, towards the main line of the Canadian Pacific Railway; not exceeding 25 miles;

(c) from a point on the Canadian Pacific Railway, northerly, towards the National Transcontinental Railway; not exceeding 50 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 51 of 1910, section 1, item 30; not exceeding in all 275 miles.

11. To the Algoma Eastern Railway Company (formerly the Manitoulin and North Shore Railway Company) for the following lines of railway:—

(a) from a point on the said company's line of railway between Little Current and Sudbury, westerly towards the Algoma Central and Hudson Bay Railway; not exceeding 76 miles;

(b) from a point at or near Sudbury, northerly; not exceeding 30 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 51 of 1910, section 1, item 29, sub-items (a) and (c) respectively; not exceeding in all 106 miles.

12. To the Tillsonburg, Lake Erie and Pacific Railway Company, for a line of railway from Ingersoll to Stratford, or to a point on the Grand Trunk Railway between Berlin and Stratford, in lieu of the subsidy granted by chapter 40 of 1907, section 1, item 12; not exceeding 35 miles.

13. To the Lac Seul, Rat Portage and Keewatin Railway Company, for a line of railway from a point at or near Kenora to the National Transcontinental Railway, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 32; not exceeding 22 miles.

14. To the Toronto, Lindsay and Pembroke Railway Company, for a line of railway from Golden Lake to Bancroft, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 38; not exceeding 51 miles.

15. To the Canadian Pacific Railway Company, for a line of railway from a point at or near Teulon to a point on the

the Icelandic River, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 27; not exceeding 35 miles.

16. To the Vancouver, Westminster and Yukon Railway Company, for a line of railway from Vancouver via Second Narrows of Burrard Inlet, northerly, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 55; not exceeding 100 miles.

17. To the Kootenay Central Railway Company, for the following lines of railway:—

(a) from Golden via Windermere and Fort Steele to a point on the British Columbia Southern Railway at or near Jukeson; not exceeding 175 miles;

(b) from a point on the British Columbia Southern Railway at or near Caithness towards the International boundary; not exceeding 25 miles;

the said subsidies being granted in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 43; not exceeding in all 200 miles.

18. To the Kettle Valley Railway Company, for a line of railway from a point at or near Grand Forks to a point 50 miles up the North Fork, and East or West Fork of North Fork, of Kettle River, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 1; not exceeding 50 miles.

19. To the Esquimalt and Nanaimo Company, for the following lines of railway:—

(a) from Wellington to Alberni; not exceeding 60 miles;

(b) from a point at or near McBride Junction to or towards the village of Sandwich; not exceeding 45 miles;

(c) from the village of Sandwich to Campbell River; not exceeding 38 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 40 of 1907, section 1, item 20, and chapter 63 of 1908, section 1, item 35; not exceeding in all 143 miles.

20. For a line of railway from a point on the Esquimalt and Nanaimo Railway, near Campbell River, towards Fort George, on the line of the Grand Trunk Pacific Railway, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 54; not exceeding 100 miles.

21. To the Fredericton and Grand Lake Coal and Railway Company, for a line of railway from a point on the Intercolonial Railway at Gibson to a point at or near Minto, together with a branch line from a point on the above mentioned line to Marysville; not exceeding 35 miles.

22. To the Great Northern Mining and Railway Company, Limited, for a line of railway from Little River through Belle Marche to Eastern Harbour; not exceeding 3 miles.

23. To the Southampton Railway Company, for a line of railway from a point at or near Millville to a point on the St. John River near the Pokiok Bridge; not exceeding 13 miles.

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24. To the Northern New Brunswick and Seaboard Railway Company, for a line of railway from the Drummond mines, at Austin Brook, a branch of the Nipisiguit River above Great Falls, in the county of Gloucester, to a point on the Intercolonial Railway, and from such point to Alston Point, on the north side, or to Caron Point, on the south side of the entrance to Bathurst Harbour in the said county; not exceeding 26 miles.

25. To the North Shore Railway Company, for the following lines of railway:—

(a) from a point at or near Adamsville, in the county of Kent, to a point at or near Snowshoe Lake in the said county, connecting with the Grand Trunk Pacific Railway; not exceeding 20 miles;

(b) from Beersville, in the county of Kent, via Roxton, to a point at or near Richibucto Head, in the said county; not exceeding 20 miles;

not exceeding in all 40 miles.

26. For a line of railway from a point at or near Rosevale in the County of Albert to Stoney Creek in the said county, and thence to the city of Moncton; not exceeding 22 miles.

27. To the Quebec Central Railway Company, for the following lines of railway:—

(a) for an extension of its line of railway from a point (30 miles from St. George) in the parish of St. Justine, county of Dorchester, to a point in the parish of St. Sabine, in the county of Bellechasse; not exceeding 1·34 miles;

(b) for an extension of its line of railway from a point (31·34 miles from St. George) in the parish of St. Sabine, county of Bellechasse, to a point in the township of Dionne, county of L'Islet; not exceeding 50 miles; not exceeding in all 51·34 miles.

28. To the Canada and Gulf Terminal Railway Company, for a line of railway from Matane, easterly, to Gaspe Basin; not exceeding 200 miles.

29. To the Grand Lake and Bell River Railway Company, for a line of railway from a point on the National Transcontinental Railway, at or near Bell River, thence following the direction of Bell River to Twenty-one Mile Bay, an arm of Grand Lake, or to Rabbit Lake on the Ottawa River, in the county of Pontiac; not exceeding 45 miles.

30. To the St. Charles and Huron River Railway Company, for a line of railway from a point on the main line of the Quebec and Lake St. John Railway, at Indian Lorette station, thence up the valley of the St. Charles River in a northerly direction to Stoneham; not exceeding 7·5 miles.

31. For a line of railway from a point on the National Transcontinental Railway, at or near Mile 837 west of Moncton,

Moncton, in a northerly and northwesterly direction, to a point at or near the mouth of the Nottaway River on James Bay; not exceeding 300 miles.

32. To the Simcoe, Grey and Bruce Railway Company, in respect of fifty miles of its proposed railway between the towns of Kincardine and Orillia, the said fifty miles to include that portion of the said line connecting the towns of Owen Sound and Meaford.

33. To the Algoma Central and Hudson Bay Railway Company, for a line of railway from a point fifty miles northerly from the junction of its line of railway with the Canadian Pacific Railway, northerly to a junction with the National Transcontinental Railway; not exceeding 65 miles.

34. To the Rainy River Radial Railway Company, for a line of railway from a point on the northern boundary of the state of Minnesota at or near the town of Fort Frances, to a point on the Lake of the Woods, at or near the mouth of Little Grassy River; not exceeding 50 miles.

35. To the Lake Erie and Northern Railway Company, for the following lines of railway:—

(a) from the town of Galt to Port Dover; not exceeding 58 miles;

(b) from the town of Paris (on the line from the town of Galt to Port Dover) to the village of Ayr; not exceeding 10 miles;

not exceeding in all 68 miles.

36. To the Bruce Mines and Algoma Railway Company, for a line of railway from a point on its line of railway at or near Rock Lake Mine in a generally northerly and easterly direction to or towards a point on the main line of the Canadian Pacific Railway near the crossing of the said railway of the Winneboga River; not exceeding 50 miles.

37. To the Manitoba and North Western Railway Company, for a line of railway from a point at or near Hamiota to a point at or near Birtle; not exceeding 30 miles.

38. To the Alberta Pacific Railway Company, for a line of railway from a point at or near the town of Cardston in a northwesterly direction via Pincher Creek to a point on the Crow's Nest Pass Branch of the Canadian Pacific Railway Company at or near Lundbreck, thence northerly and west of the Porcupine Hills towards Calgary; not exceeding 100 miles.

39. To the Burrard Inlet Tunnel and Bridge Company, for the following lines of railway:—

(a) from the town of Eburne on the Fraser River to a point at or near the mouth of Seymour Creek on the north shore of the Second Narrows; not exceeding 10 miles;

(b) from a point at or near Seymour Creek on the north shore of the Second Narrows to Deep Cove on the north arm of Burrard Inlet; not exceeding 5 miles;

(c)

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(c) from a point at or near Seymour Creek on the north shore of the Second Narrows to a point on Horseshoe Bay; not exceeding 14 miles;

(d) from a point at or near Pender street in the city of Vancouver to a point at or near lot 264, North Vancouver; not exceeding 3 miles;

not exceeding in all 32 miles.

40. To the Caribou, Barkerville and Willow River Railway Company, for a line of railway from a point on the Grand Trunk Pacific Railway, at or near Eagle Lake, to a point on the Caribou Road at or near the town of Barkerville; not exceeding 107 miles.

41. To the Naas and Skeena Rivers Railway Company, for a line of railway from the Nasoga Gulf or some other point on the waters of the Portland Inlet or Naas River to or towards the anthracite coal deposits on the Skeena River near Ground Hog Mountain; not exceeding 100 miles.

42. To the Kettle Valley Railway Company, for a line of railway from a point at or near Penticton on Okanagan Lake to a point on the International boundary; not exceeding 50 miles.

43. To the Calgary and Fernie Railway Company, for a line of railway from a point at or near the city of Calgary in the province of Alberta, in a southwesterly direction, via Kananaskis Pass and the headwaters of the Elk River to or towards the city of Fernie, in the province of British Columbia; not exceeding 100 miles.

44. To the Grand Trunk Pacific Railway Company, for a line of railway from Harte southwesterly into the city of Brandon; not exceeding 25 miles.

3. The Governor in Council may grant the subsidies hereinafter mentioned towards the construction and completion of the bridges also hereinafter mentioned, that is to say:—

Subsidies for bridges.

1. To the Vancouver, Westminster and Yukon Railway Company, towards the construction and completion of a railway bridge across Burrard Inlet, in lieu of the subsidy granted by chapter 63 of 1908, section 2, item 6; not exceeding \$350,000.

2. To the Canadian Pacific Railway Company (lessees of the Calgary and Edmonton Railway Company) towards the construction and completion of a bridge over the Saskatchewan River connecting Strathcona and Edmonton, 15 per cent upon the amount expended thereon, in lieu of the subsidy granted by chapter 63 of 1908, section 2, item 2; not exceeding \$126,000.

3. To the Canadian Pacific Railway Company, towards the construction and completion of a bridge over the Saskatchewan River at Outlook, Saskatchewan, 15 per cent upon

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upon the amount expended thereon; not exceeding \$115,000.

4. To the Kettle Valley Railway Company, towards the construction and completion of a railway bridge over the Fraser River, near Hope, British Columbia; not exceeding \$250,000.

5. To the Caribou, Barkerville and Willow River Railway Company, towards the construction and completion of all its railway bridges (about twenty in number) over the Willow River, 25 per cent upon the total amount expended thereon; not exceeding \$95,000.

6. To the Grand Trunk Pacific Railway Company, towards the construction and completion of a railway bridge over the Assiniboine River at the city of Brandon, 25 per cent upon the amount expended thereon; such bridge to be completed without unnecessary delay.

"Cost"
defined.

4. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and shall include the amount expended upon any bridge, up to and not exceeding \$25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway nor the cost of terminals nor the cost of right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the chief engineer of the Department of Railways and Canals, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

How
subsidies
shall be
paid.

5. The subsidies hereby authorized towards the construction of any railway or bridge shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:—

- (a) Upon the completion of the work subsidized; or,
- (b) By instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; or,
- (c) Upon the progress estimates on the certificate of the chief engineer of the Department of Railways and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made

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made justifies the payment of a sum not less than thirty thousand dollars; or,

(d) With respect to (b) and (c), part one way, part the other.

6. The subsidies hereinbefore authorized to be granted to companies named shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railway and bridges respectively; all the lines and the bridges for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August, 1912, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines and bridges shall be subject to the approval of the Governor in Council. Conditions.

7. The granting of such subsidies and the receipt thereof by the respective companies shall be subject to the condition that the Board of Railway Commissioners for Canada may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with the railway and bridges so subsidized reasonable and proper facilities in exercising such running power, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways and bridges hereby subsidized: Provided always that any decision of the said Board made under this section may be at any time varied, changed or rescinded by the Governor in Council, as he deems just and proper. As to running powers.

8. Every company receiving a subsidy under this Act, its successors and assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the lines in respect of which it Transportation of Government supplies, etc.
has

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has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the department of the Government for which such service is being performed and the company performing it, and, in case of disagreement, then at such rates as are approved by the Board of Railway Commissioners for Canada; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of the subsidy received by the company under this Act.

Production
of accounts.

9. As respects all railways and bridges for which subsidies are granted by this Act, the company at any time owning or operating any of the railways or bridges shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway or bridge, the cost of operating it, and the earnings thereof.

As to
Canadian
steel rails.

10. The Governor in Council may make it a condition of the grant of the subsidies herein provided that the company shall lay the railway with new steel rails and fastenings made in Canada and shall purchase all materials and supplies required for the construction of the railway and bridges, and the rolling stock for the first equipment of the railway, from Canadian producers, if such rails, fastenings, materials, supplies and equipment are procurable in Canada of suitable quality and upon terms as favourable as elsewhere, of which the Minister of Railways and Canals shall be the judge.

Mode of
payment of
certain
railway
subsidies.

11. Whenever a contract has been duly entered into with a company for the construction of any line of railway hereby subsidized, the Minister of Railways and Canals, at the request of the Company, and upon the report of the chief engineer of the Department of Railways and Canals and his certificate that he has made careful examination of the surveys, plans and profile of the whole line so contracted for, and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the reasonable and probable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the chief engineer and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of \$3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said \$3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion

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completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the Governor in Council upon the recommendation of the Minister of Railways and Canals, and upon the report and certificate of the said chief engineer, entitles the company thereto: Provided always—

- (a) that the estimated cost, as certified, is not less on the average than \$18,000 per mile for the whole milcage subsidized;
- (b) that no payment shall be made except upon a certificate of the chief engineer that the work done is up to the standard specified in the company's contract;
- (c) that in no case shall the subsidy exceed the sum of \$6,400 per mile.



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CHAP. 10.

An Act to authorize the granting of subsidies in aid of the construction of certain lines of railway of the Canadian Northern Ontario Railway Company and the Canadian Northern Alberta Railway Company respectively.

[Assented to 6th June, 1913.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. The Governor in Council may grant a subsidy of six thousand four hundred dollars per mile to the Canadian Northern Ontario Railway Company, towards the construction of a railway from the city of Toronto, in the province of Ontario, to the city of Ottawa, in the said province, not exceeding two hundred and fifty miles.

Subsidy authorized for Toronto to Ottawa line.

2. The Governor in Council may grant a subsidy of twelve thousand dollars per mile towards each of the under-mentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) namely:—

For Ottawa to Port Arthur, and Edmonton to Yellowhead Pass.

- (a) to the Canadian Northern Ontario Railway Company, for a line of railway from the city of Ottawa, in the province of Ontario, to the city of Port Arthur in the said province; not exceeding 910 miles;
- (b) to the Canadian Northern Alberta Railway Company for a line of railway from the city of Edmonton, in the province of Alberta, to the boundary of the province of British Columbia at or in the Yellowhead Pass; not exceeding 260 miles.

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How
subsides
shall be paid.

3. The subsidies hereby authorized shall be payable out of the Consolidated Revenue Fund of Canada and may, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows;—

- (a) upon completion of the work subsidized; or,
- (b) by instalments, on the completion of each ten-mile section of the railway; in the proportion which the cost of such completed section bears to that of the whole work undertaken; the cost for the purpose of this paragraph to be determined by the Governor in Council; or,
- (c) upon the progress estimates on the certificate of the chief engineer of the Department of Railways and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars; or,
- (d) with respect to (b) and (c), part one way, part the other.

Time for
construction
of railway
limited.

4. The lines, for the construction of which subsidies are hereby granted, shall be completed within a reasonable time, not to exceed three years from the first day of August, nineteen hundred and thirteen, to be fixed by the Governor in Council, and shall also be constructed and completed to the satisfaction of the Governor in Council.

Conditions
as to
running
powers.

5. The granting of such subsidies and the receipt thereof by the respective companies shall be subject to the condition that the Board of Railway Commissioners for Canada may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with the railway so subsidized reasonable and proper facilities in exercising such running power, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways hereby subsidized; provided always that any decision of the said Board made under this section may be at any time varied, changed or rescinded by the Governor in Council as he deems just and proper.

Transporta-
tion of
Government
supplies, etc.

6. The Companies receiving subsidies under this Act, their successors and assigns, and any person or company controlling or operating the railways or portions of the railways subsidized under this Act, shall each year furnish to the

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the Government of Canada transportation for men, supplies, materials and mails over the portion of the lines in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the Department of the Government for which such service is being performed and the company performing it, and, in case of disagreement, then at such rates as are approved by the Board of Railway Commissioners for Canada; and in and toward the payment of such charges the Government of Canada shall be credited by the company with a sum equal to three per cent on the amount of the subsidy received by the company under section 1 of this Act and on the amount of the subsidy up to six thousand four hundred dollars per mile received by the Company under section 2 of this Act.

7. As respects the railways for which subsidies are granted by this Act, the company at any time owning or operating any of the railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway, the cost of operating it, and the earnings thereof. Books to be produced.

8. No subsidy shall be granted under this Act unless and until there shall have been issued and transferred upon the books of the Canadian Northern Railway Company to the Minister of Finance and Receiver General of Canada, in trust for His Majesty, shares in the common stock of the Canadian Northern Railway Company of the par value of seven million dollars, which said stock and all rights appurtenant thereto shall be held for the benefit of His Majesty absolutely, and shall be deemed to be fully paid up, non-assessable and not subject to calls; provided that the said stock or any part thereof may be disposed of under the authority of Parliament upon such terms and conditions as it may determine and the proceeds of the sale thereof paid into the Consolidated Revenue Fund of Canada. Transfer of stock to Crown.

9. The Canadian Northern Railway Company is hereby authorized and empowered to issue and transfer to the Minister of Finance and Receiver General of Canada, in trust as aforesaid, from and out of the authorized capital shares of its common stock of the par value of seven million dollars fully paid up and non-assessable and not subject to calls as aforesaid, upon the consideration of the Governor in Issue of stock in return for subsidies.

Council

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Council undertaking to grant to the Canadian Northern Ontario Railway Company and the Canadian Northern Alberta Railway Company the subsidies referred to in section 2 of this Act upon the terms aforesaid, and such stock when so issued and transferred shall be deemed fully paid without further or other consideration.



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CHAP. 46.

An Act to authorize the granting of Subsidies in aid of the construction of the railways and bridge therein mentioned.

[Assented to 6th June, 1913.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Railway Subsidies Act, 1913.* Short title.

2. The Governor in Council may grant a subsidy of \$3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated), which shall not cost more on the average than \$15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway, not exceeding the mileage hereinafter stated, which shall cost more on the average than \$15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of \$3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of \$15,000 per mile, such subsidy not exceeding in the whole the sum of \$6,400 per mile:—

1. To the Margaree Coal and Railway Company, Limited, for the following lines of railway:—

(a) from a point on the Intercolonial Railway near Orangedale to St. Rose; not exceeding 46 miles;

(b) from a point on the Intercolonial Railway near McIntyre lake to Caribou cove, Port Malcolm, Richmond county; not exceeding 4 miles;

the said subsidies being granted in lieu of subsidy granted by chapter 51 of 1910, section 1, item 4; not exceeding 50 miles.

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2. To the Northern New Brunswick and Seaboard Railway Company, for a line of railway from the Drummond Mines at Austin brook, a branch of the Nipisiguit river above Great Falls in the county of Gloucester to a point on the Intercolonial Railway where it intersects the branch line* from Bathurst station to Bathurst Harbour, in lieu of the subsidy granted by chapter 48 of 1912, section 2, item 24; not exceeding 16.9 miles.

3. To the Tobique and Campbellton Railway Company, for a line of railway from Plaster Rock along the Tobique river to Riley brook, in lieu of subsidy granted by chapter 51 of 1910, section 1, item 15; not exceeding 28 miles.

4. To the St. John and Quebec Railway Company, for a line of railway from Andover to St. John, New Brunswick, exclusive of a railway bridge across the St. John river, at or near Mistake, and a railway bridge across the Kennebecasis river at or near Perry Point; in lieu of subsidy granted by chapter 48 of 1912, section 2, item 2; not exceeding 200 miles.

5. To the Lotbinière and Megantic Railway Company for a line of railway from a point at or near Lyster in Megantic county to a point at or near Lime Ridge in the township of Dudswell in the county of Wolfe, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 23, for a line of railway between the points above mentioned; not exceeding 60 miles.

6. For a line of railway from a point on the Canadian Pacific Railway at or near Scotstown or Megantic to the International boundary, in lieu of the subsidy granted by chapter 40 of 1907, section 1, item 19; not exceeding 35 miles.

7. To the Little Nation River Railway Company for a line of railway from a point between Thurso and Montebello on the line of the Canadian Pacific Railway, northerly, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 46; not exceeding 30 miles.

8. To the Erie, London and Tillsonburg Railway Company, for a line of railway from Port Burwell to London, passing through or near Vienna, Calton, Aylmer, Kingsmill and Belmont, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 37; not exceeding 35 miles.

9. To the Tillsonburg, Lake Erie and Pacific Railway Company, for a line of railway from Ingersoll north to a junction with the St. Mary's and Western Ontario railway at Embro, in lieu of the subsidy granted by chapter 48 of 1912, section 2, item 12; not exceeding 10.38 miles.

10. To the Canadian Pacific Railway Company, for a line of railway from Gimli to a point on the Icelandic river
at

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at or near Riverton, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 39, for a line between the points above mentioned; not exceeding 30 miles.

11. To the Canadian Pacific Railway Company, for a line of railway from Moosejaw, in a northwesterly direction, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 40; not exceeding 123 miles.

12. To the Alberta Central Railway Company, for a line of railway from Red Deer to Rocky Mountain House, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 38; not exceeding 70 miles.

13. To the Kettle Valley Railway Company, for the following lines of railway:—

(a) from Merritt to Penticton Wharf; not exceeding 145 miles;

(b) from a point on the line between Merritt and Penticton Wharf, at or near Penticton, to Midway; not exceeding 135 miles;

(c) from a point on the line between Merritt and Penticton Wharf, about 25 miles south of Merritt, to a point on the Fraser river near Hope station; not exceeding 55 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 51 of 1910, section 1, item 42; not exceeding in all 335 miles.

14. To the Calgary and Fernie Railway Company for a line of railway from Michel or Sparwood, in a northerly direction via the headwaters of the Elk river and Kananaskis Pass to a point at or near the city of Calgary, in lieu of the subsidy granted by chapter 48 of 1912, section 2, item 43; not exceeding 100 miles.

3. The Governor in Council may grant the subsidy hereinafter mentioned towards the construction and completion of the bridge hereinafter mentioned, that is to say:—

Subsidy
for bridge.

To the Burrard Inlet Tunnel and Bridge Company towards the construction and completion of a bridge over the Second Narrows of Burrard Inlet, as authorized by chapter 74 of 1910, in lieu of the subsidy granted by chapter 48 of 1912, section 3, item 1; not exceeding \$350,000.

4. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and shall include the amount expended upon any bridge, up to and not exceeding \$25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway or the cost of terminals or the cost of right of way of

"Cost"
defined.

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of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the chief engineer of the Department of Railways and Canals, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

How
subsidies
shall be
paid.

5. The subsidies hereby authorized towards the construction of any railway or bridge shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:—

- (a) Upon the completion of the work subsidized; or,
- (b) By instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; or,
- (c) Upon the progress estimates on the certificate of the chief engineer of the Department of Railways and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars; or,
- (d) With respect to (b) and (c), part one way, part the other.

Conditions.

6. The subsidies hereinbefore authorized to be granted to companies named shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railways and bridges respectively; all the lines and the bridges for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August, one thousand nine hundred and thirteen, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals and

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and specified in each case in a contract between the company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines and bridges shall be subject to the approval of the Governor in Council.

7. The granting of such subsidies and the receipt thereof by the respective companies shall be subject to the condition that the Board of Railway Commissioners for Canada may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with the railway and bridges so subsidized reasonable and proper facilities in exercising such running power, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways and bridges hereby subsidized: Provided always that any decision of the said Board made under this section may be at any time varied, changed or rescinded by the Governor in Council, as he deems just and proper.

8. Every company receiving a subsidy under this Act, its successors and assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the lines in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the department of the Government for which such service is being performed and the company performing it, and, in case of disagreement, then at such rates as are approved by the Board of Railway Commissioners for Canada; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of the subsidy received by the company under this Act.

9. As respects all railways and bridges for which subsidies are granted by this Act, the company at any time owning or operating any of the railways or bridges shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and

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and vouchers showing the cost of constructing the railway or bridge, the cost of operating it, and the earnings thereof.

As to
Canadian
steel rails.

10. The Governor in Council may make it a condition of the grant of the subsidies herein provided that the company shall lay the railway with new steel rails and fastenings made in Canada and shall purchase all materials and supplies required for the construction of the railway and bridges and the rolling stock for the first equipment of the railway, from Canadian producers, if such rails, fastenings, materials, supplies and equipment are procurable in Canada of suitable quality and upon terms as favourable as elsewhere, of which the Minister of Railways and Canals shall be the judge.

Mode of
payment of
over and
railway
subsidies.

11. Whenever a contract has been duly entered into with a company for the construction of any line of railway hereby subsidized, the Minister of Railways and Canals, at the request of the company, and upon the report of the chief engineer of the Department of Railways and Canals and his certificate that he has made careful examination of the surveys, plans and profile of the whole line so contracted for, and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the reasonable and probable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the chief engineer and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of \$3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said \$3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the Governor in Council upon the recommendation of the Minister of Railways and Canals, and upon the report and certificate of the said chief engineer, entitles the company thereto: Provided always—

- (a) that the estimated cost, as certified, is not less on the average than \$18,000 per mile for the whole mileage subsidized;
- (b) that no payment shall be made except upon a certificate of the chief engineer that the work done is up to the standard specified in the company's contract;
- (c) that in no case shall the subsidy exceed the sum of \$6,400 per mile.



3-4 GEORGE V.

CHAP 53.

An Act to authorize the granting of Subsidies to the Government of the Province of Ontario in aid of the construction of the Temiskaming and Northern Ontario Railway.

[Assented to 6th June, 1913.]

WHEREAS the Government of the province of Ontario Preamble.
has constructed a line of railway known as the Temiskaming and Northern Ontario Railway, from North Bay on the Canadian Pacific Railway, and at a junction with the Toronto line, so called, of the Grand Trunk Railway, to Cochrane on the Grand Trunk Pacific Railway, and several branches thereof, and has them under operation; and whereas the line of railway from North Bay to Cochrane makes a through connection for the Transcontinental Railway with Toronto, and also with Montreal and Quebec, and being, as such, a work of national and not merely provincial utility: Therefore His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Temiskaming and Northern Ontario Railway Aid Act*. Short title.

2. The Governor in Council may grant to the Government of the province of Ontario, in consideration of its having constructed each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated), a subsidy not exceeding \$6,400 per mile:— Subsidies to Government of Ontario for construction of railways.

- (i) For the line of railway from North Bay on the Canadian Pacific Railway to Cochrane on the Grand Trunk Pacific Railway; not exceeding 252.8 miles.

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- (ii) For the following branch lines of railway:—
- (a) From Englehart to Charlton; not exceeding 7·8 miles;
 - (b) From Cobalt to Kerr Lake; not exceeding 3·9 miles;
 - (c) From Iroquois Falls to Timmins; not exceeding 33·2 miles;
 - (d) From Earlton to Elk Lake City; not exceeding 28·5 miles;
 - (e) From Iroquois Falls Station to Iroquois Falls; not exceeding 7·25 miles.

How
subsidies
shall be paid.

3. The subsidies hereby authorized shall be payable out of the Consolidated Revenue Fund of Canada at the option of the Governor in Council, and may be paid upon the certificate of the chief engineer of the Department of Railways and Canals as to the mileage constructed, in such manner and in such amounts, and subject to such conditions, if any, as the Governor in Council deems expedient.

Commence-
ment of Act.

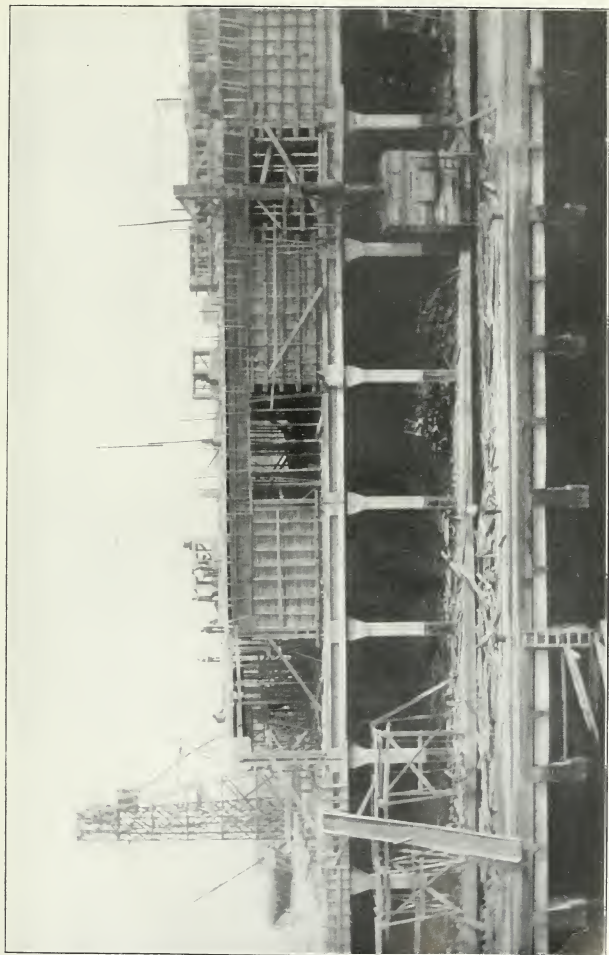
4. This Act shall come into force on a day to be fixed by proclamation of the Governor in Council published in *The Canada Gazette*.

PART X

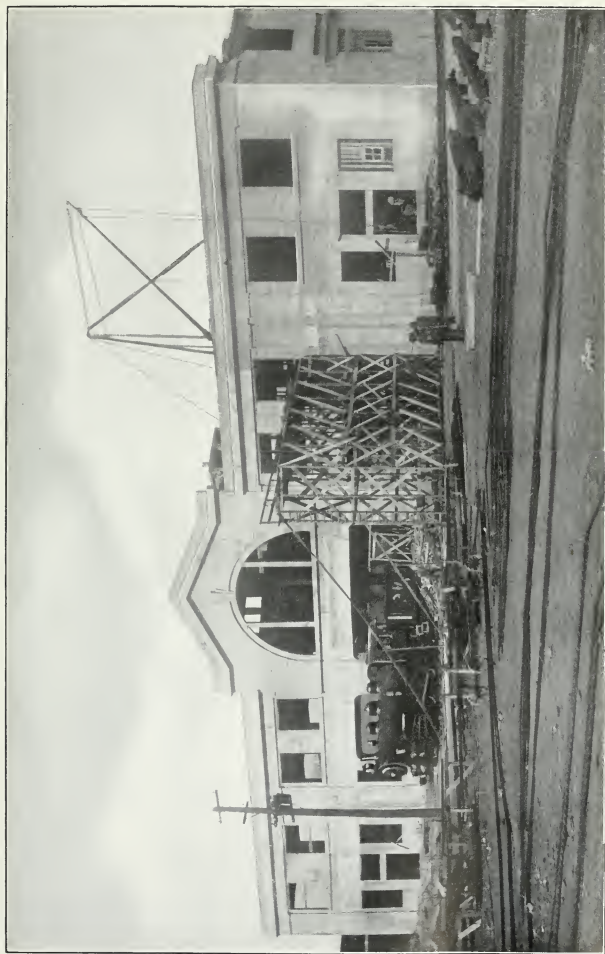
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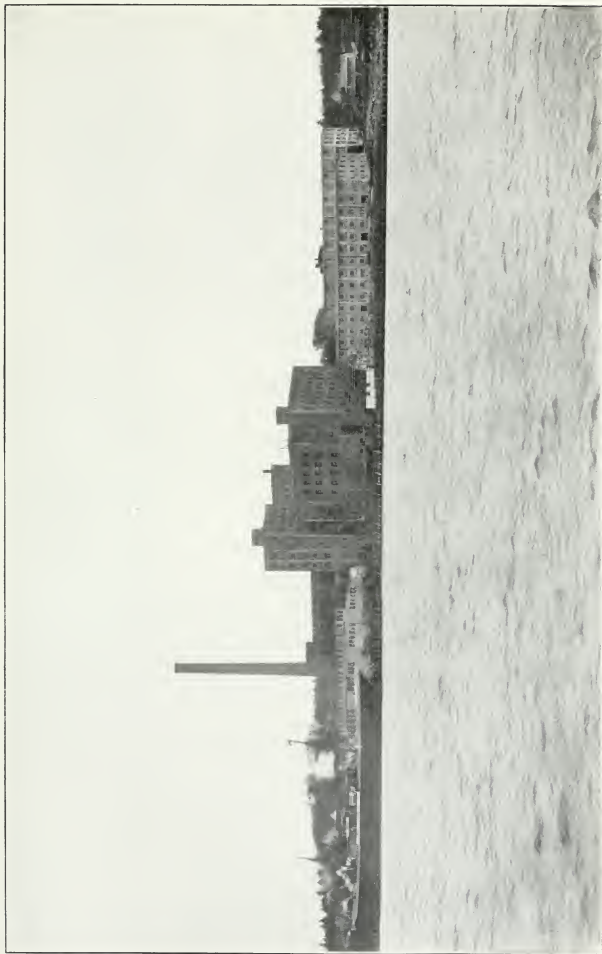
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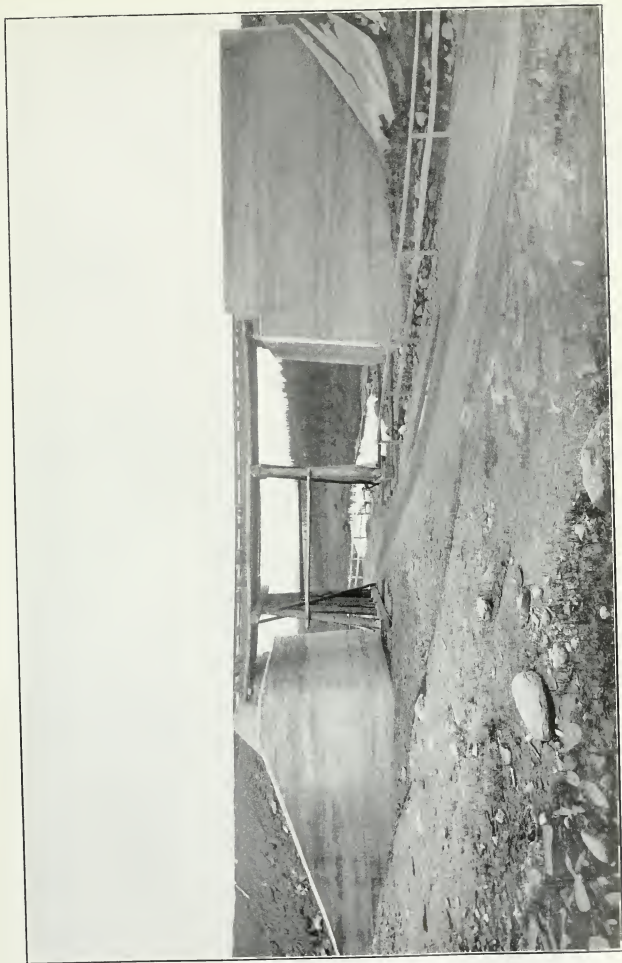
Intercolonial Railway. Halifax deep water terminals. View of pier.



Intercolonial Railway. Halifax deep water terminals.



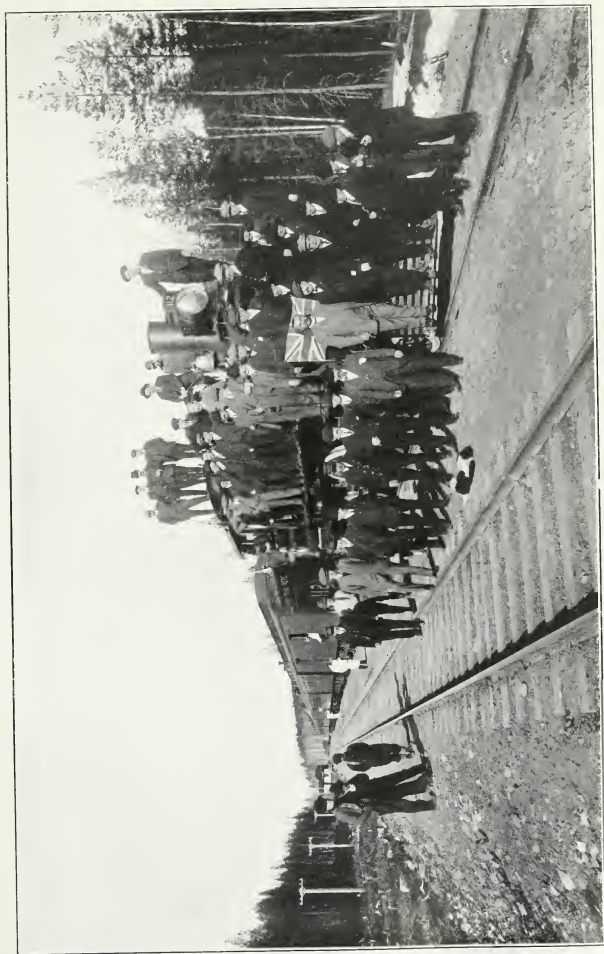
Intercolonial Railway. Dartmouth to Dean's Branch. Acadia Sugar Refinery at Woodside.



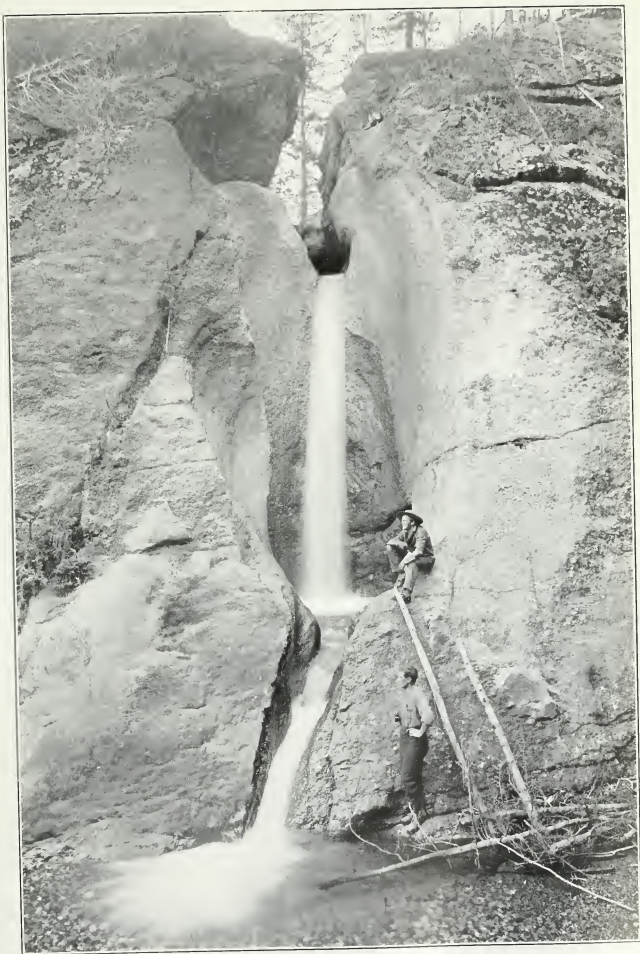
Intercolonial Railway. Dartmouth to Dean's Branch. Overhead crossing of public road at Chezzetook.



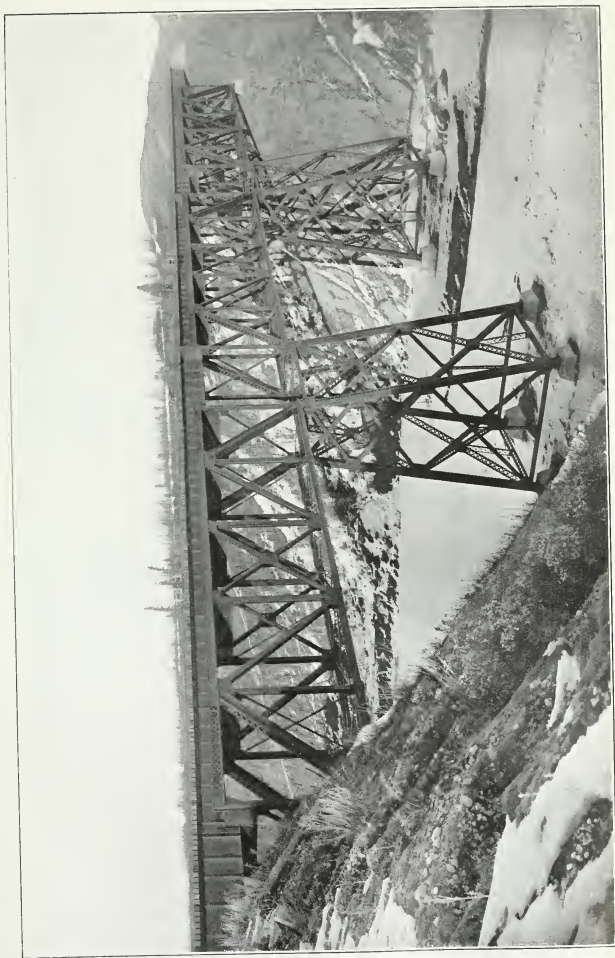
Intercolonial Railway. Cutting on Dartmouth to Dean's Branch.



Grand Trunk Pacific Railway. First through train, Winnipeg to Prince Rupert, April 1914.



Grand Trunk Pacific Railway. Punch Bowl Falls, Jasper Park, Alberta.



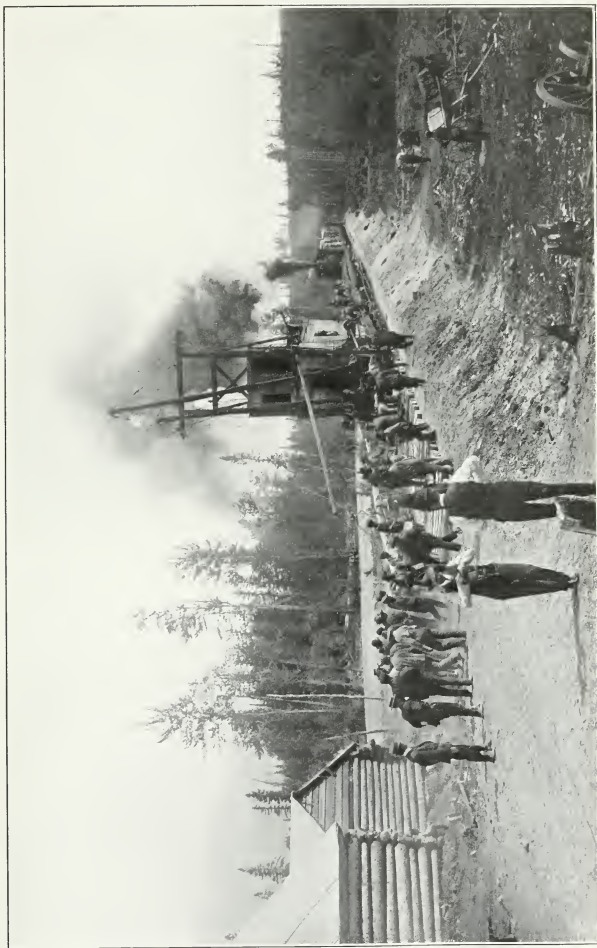
Grand Trunk Pacific Railway. Bridge over Wolf Creek, 120 miles west from Edmonton. The east bank is the point of division between the prairie and the mountain sections of the railway.



Grand Trunk Pacific Railway. Tête Jaune Cache, during the construction of the railway.



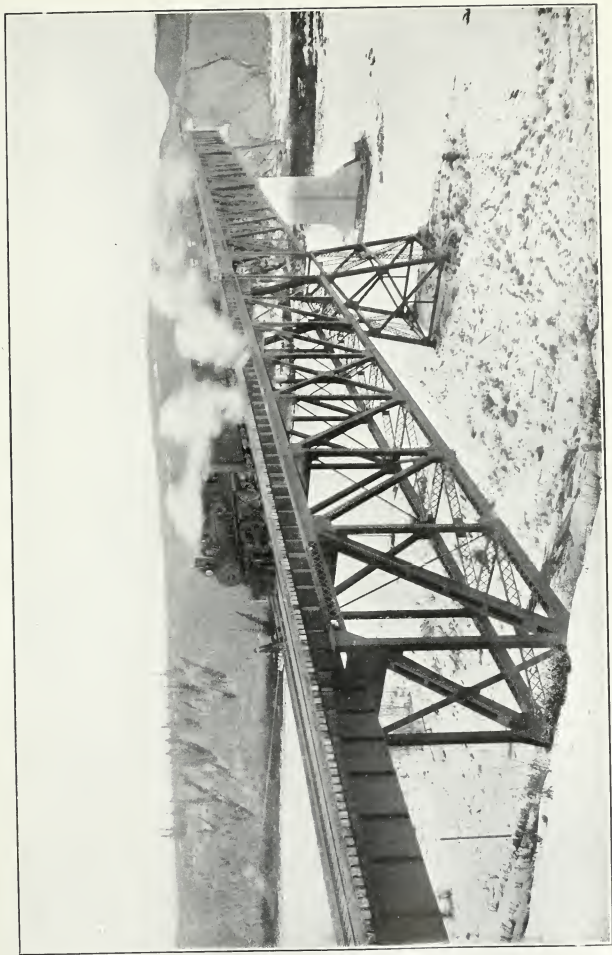
Grand Trunk Pacific Railway. Contractors' supplies scows on the Fraser river at Tête Jaune Cache, B.C.



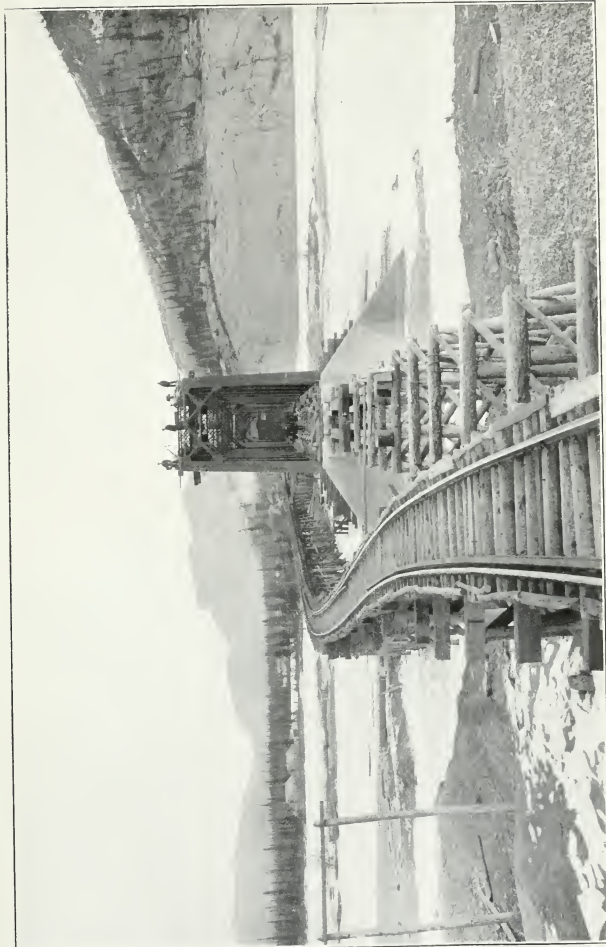
Grand Trunk Pacific Railway. Track laying machine coming into Tête Jaune Cache, B.C.



Grand Trunk Pacific Railway. Tête-Jaune Cache, Fraser river, B.C.



Grand Trunk Pacific Railway. Bridge over the McLeod river, west of Edmonton.



Grand Trunk Pacific Railway. Construction of steel bridge over the Athabaska river, Alberta.



Grand Trunk Pacific Railway. The path finder near Mount Robson, B.C.



Grand Trunk Pacific Railway. The path finder in the Rocky mountains.



Grand Trunk Pacific Railway. Transporting contractors' supplies down the Fraser river, B.C.



Grand Trunk Pacific Railway. Laying the last rails, Central British Columbia.

PLATE XVI.



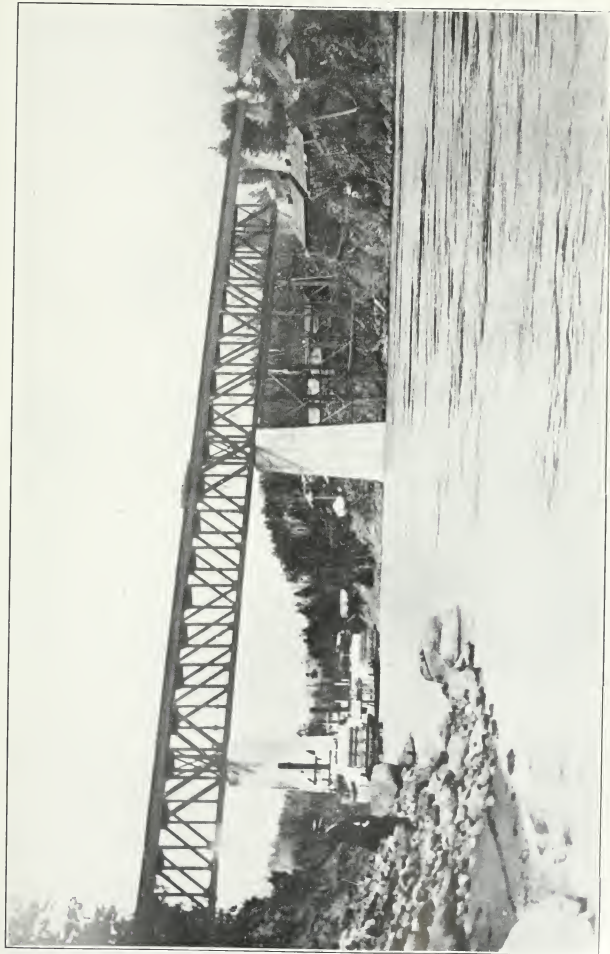
Grand Trunk Pacific Railway. Mount Robson, B.C.



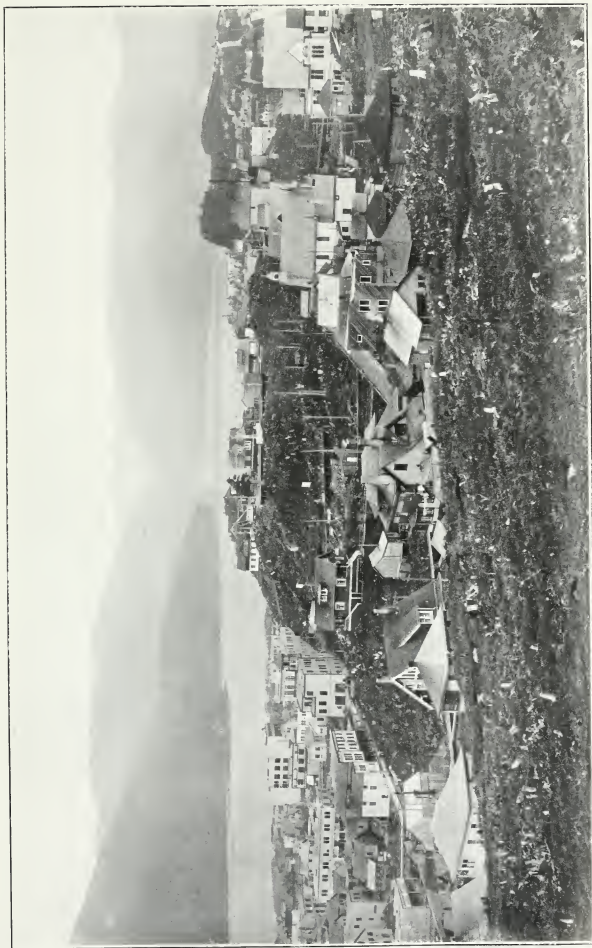
Grand Trunk Pacific Railway. The old and the new, Skeena river, B.C.



Grand Trunk Pacific Railway. "Hole in the Wall." A view along the banks of the Skeena river, B.C.



Grand Trunk Pacific Railway. Bridge over the Skeena river, B.C.



Grand Trunk Pacific Railway. Prince Rupert, the Pacific terminus.

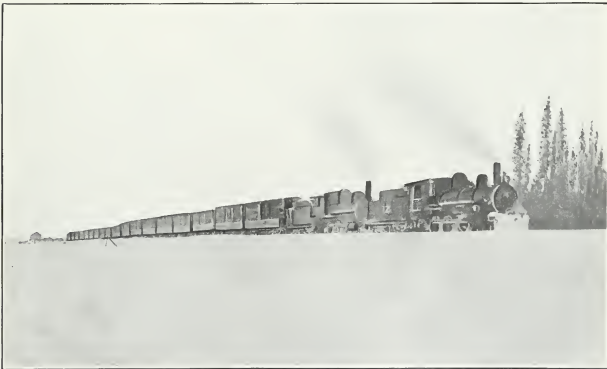
PLATE XXI.



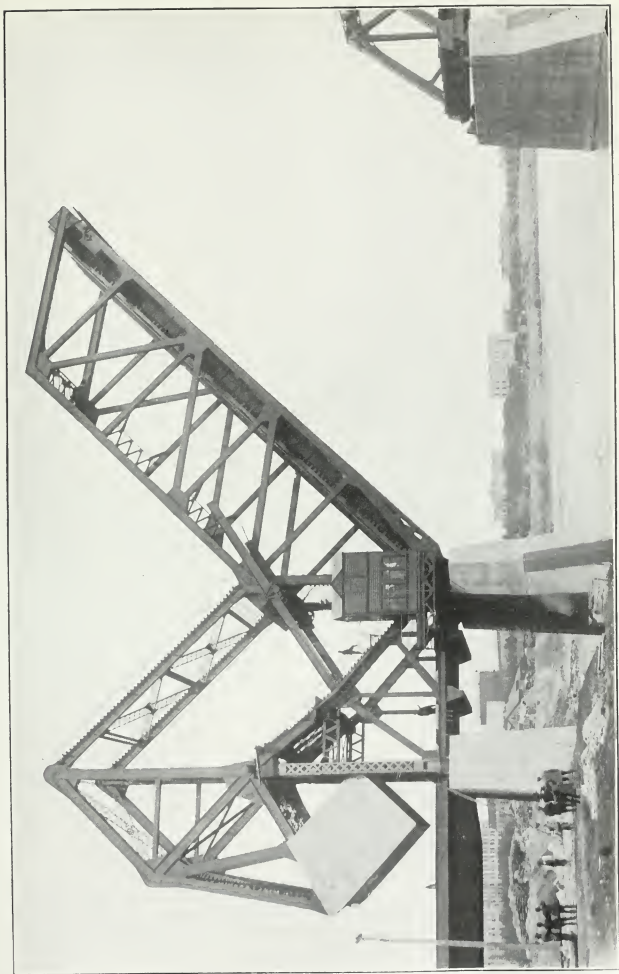
Transportation before construction of Transcontinental Railway.



Transportation before construction of Transcontinental Railway.



First wheat train over Trans-continental Railway leaving Hearst, Ont., December 31, 1912.



Transcontinental Railway. Bascule bridge over the Red river at Winnipeg.



Transcontinental Railway. Bridge over the Ground Hog River, 1,078 miles from Moncton.



Transcontinental Railway. Freight car shop, Transcona, Man.



Transcontinental Railway. Freight car shop at Transcona, Man.



Hudson Bay Railway. Wharf No. 2, Port Nelson.



Hudson Bay Railway. Wharf No. 3, Port Nelson.



Hudson Bay Railway. Headquarters camp, Port Nelson.



Hudson Bay Railway. Eastern end of encampment, showing wireless installation in background.



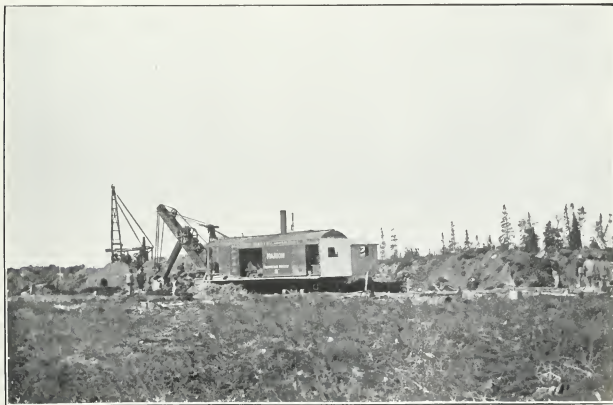
Hudson Bay Railway. Tug "Kathleen" and motor schooner "Neophite" in winter quarters, Port Nelson.



Hudson Bay Railway. Port Nelson. Tug "Kathleen," with a scow built at the port.



Hudson Bay Railway. Hull of stern wheel tug assembled and ready for launching.



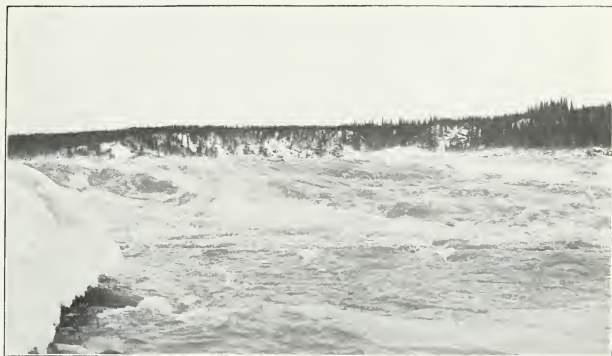
Hudson Bay Railway. Steam shovel at work, Port Nelson.



Hudson Bay Railway. Mail team leaving Port Nelson.



Hudson Bay Railway. Ice bridge on the Nelson river.



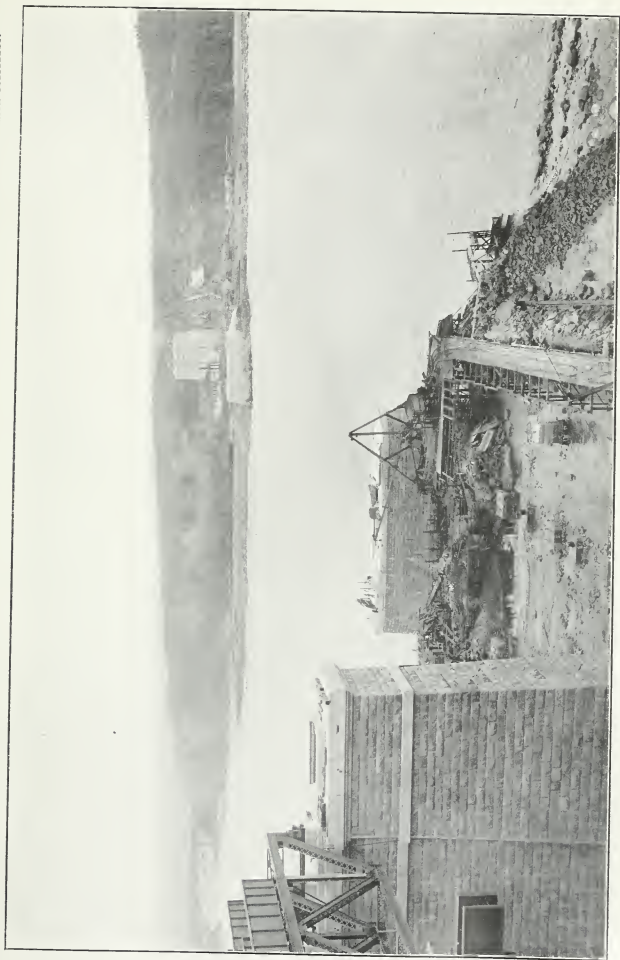
Hudson Bay Railway. Kettle Rapids, Nelson River.



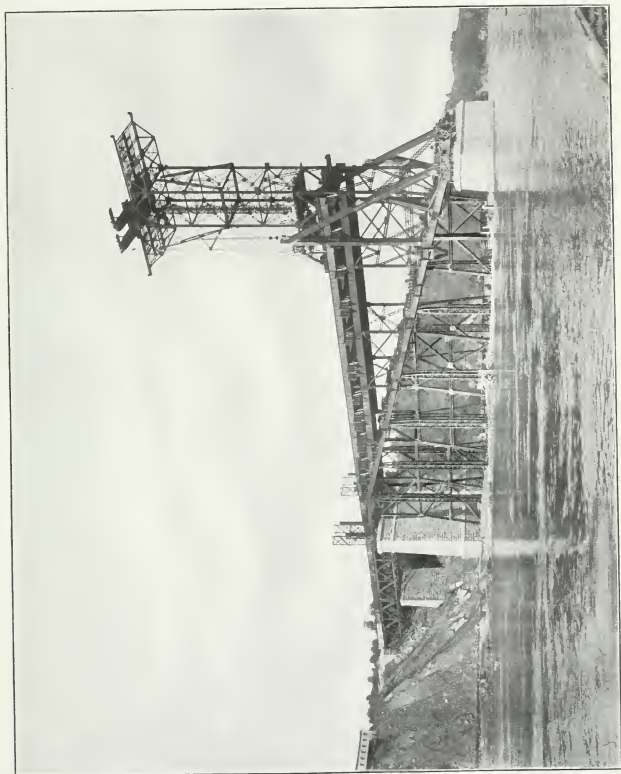
Hudson Bay Railway. White Mud Falls, Nelson River.



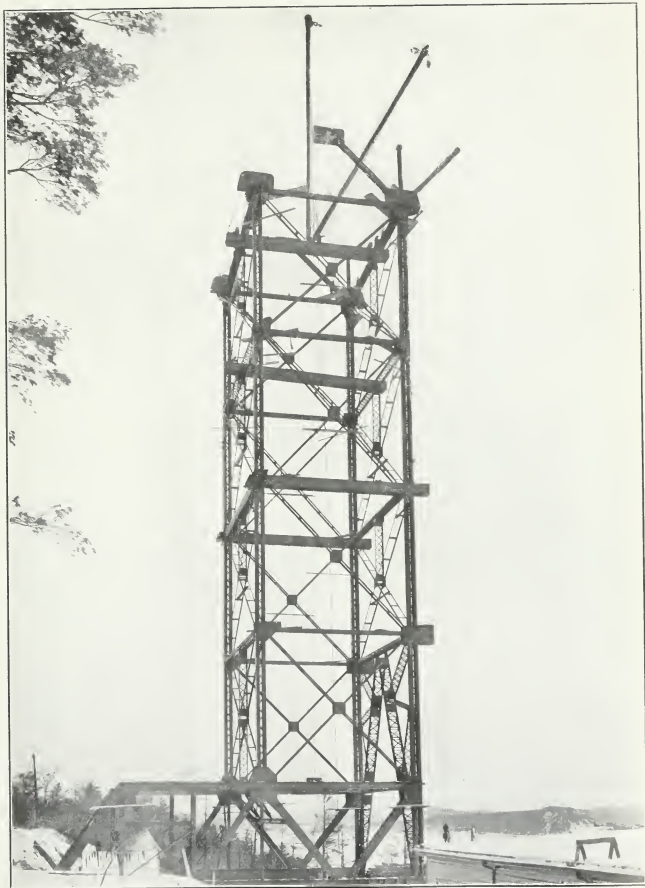
Hudson Bay Railway. Manitou Rapids, Nelson River, near proposed point of crossing.



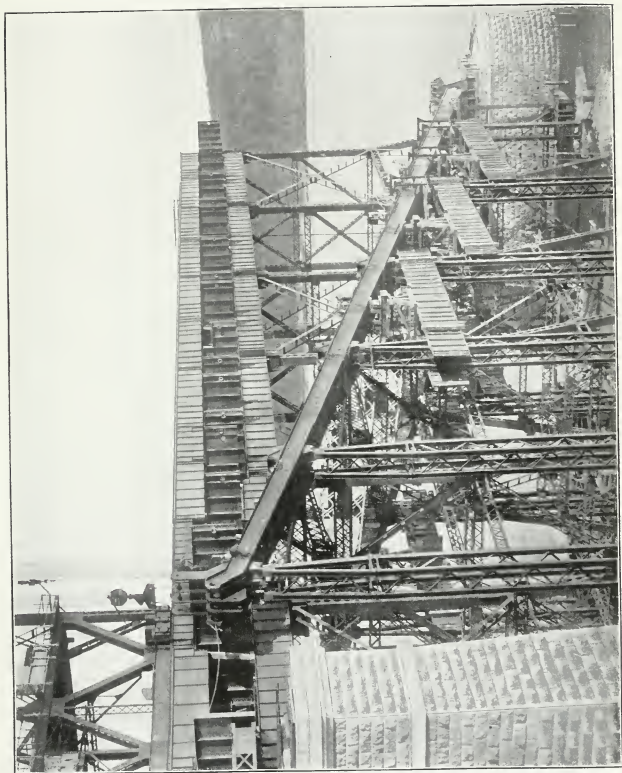
Quebec Bridge. General view from north shore, showing completed masonry.



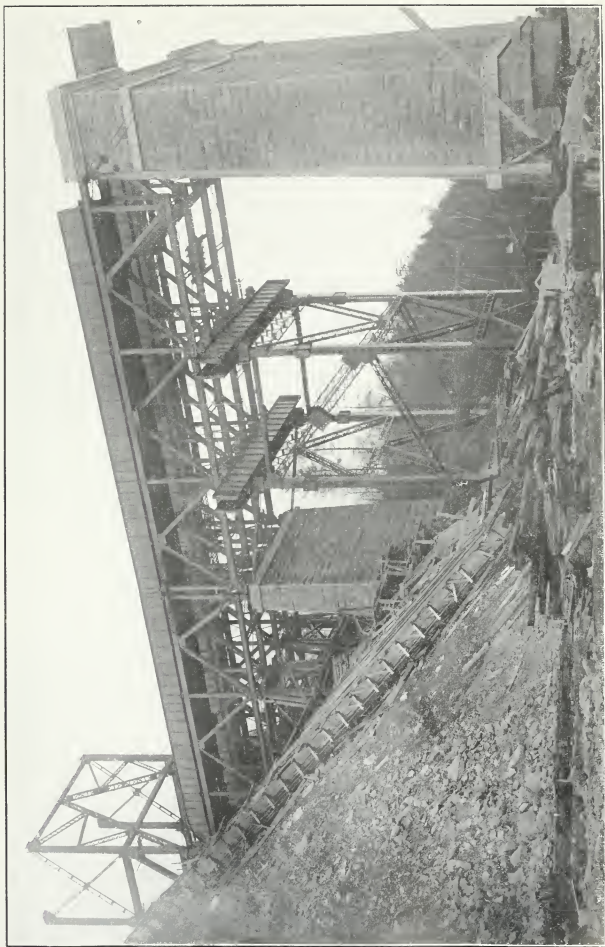
Quebec Bridge. View of bottom chords of north anchor arm in place, resting on steel falsework ; with the 1,000-ton erecting traveller engaged in placing the web members of the bridge.



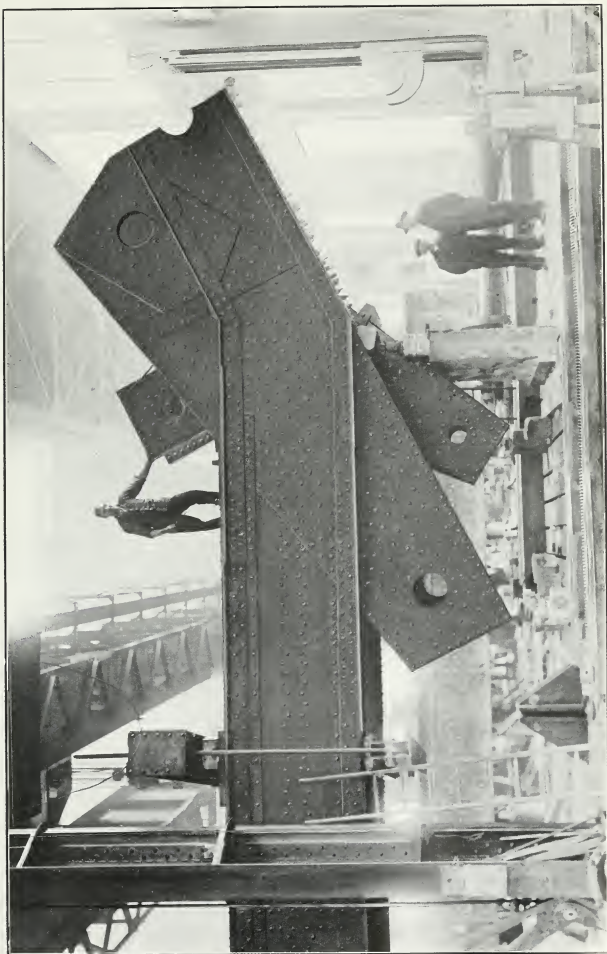
Quebec Bridge. View showing the 1,000-ton erection traveller in course of construction.



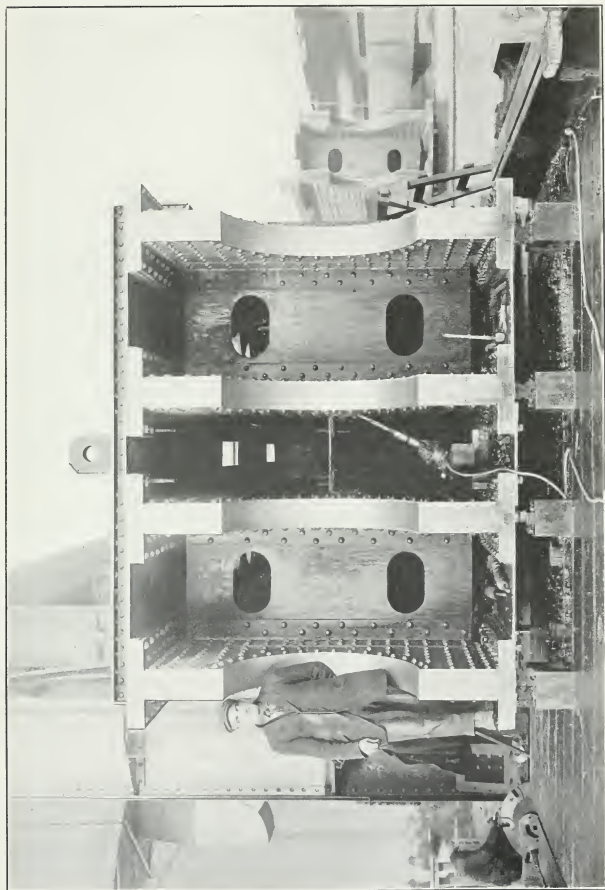
Quebec Bridge. View showing the bottom chords of the north anchor arm in place between the main and anchor piers. The chords are resting on steel falsework, which will be removed later.



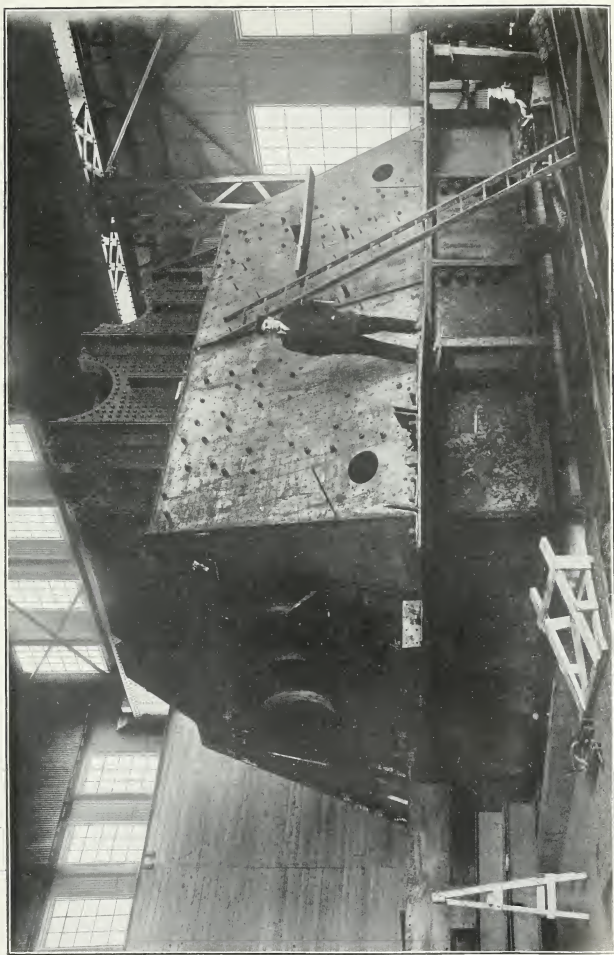
Quebec Bridge. View showing north approach span.



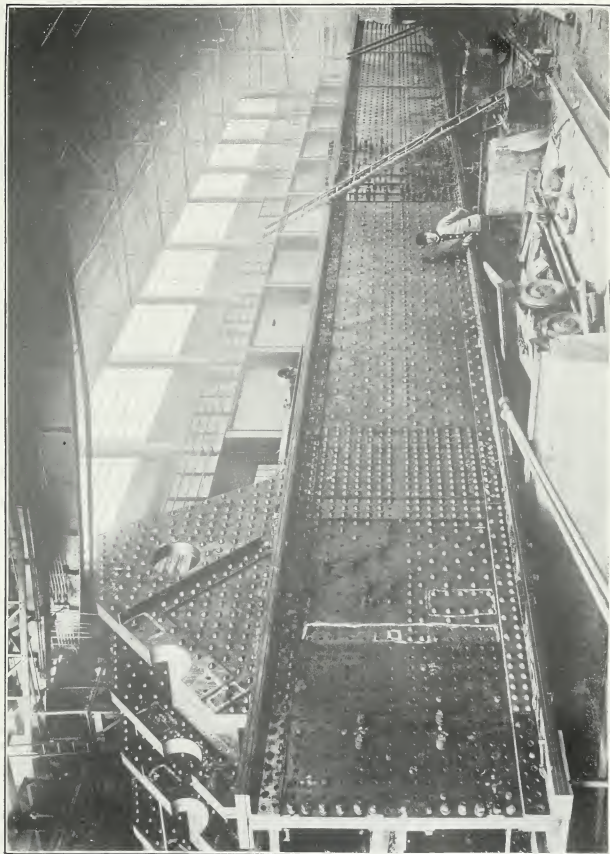
Quebec Bridge. View of end connection of one of the main compression verticals. Six members meet at this point.



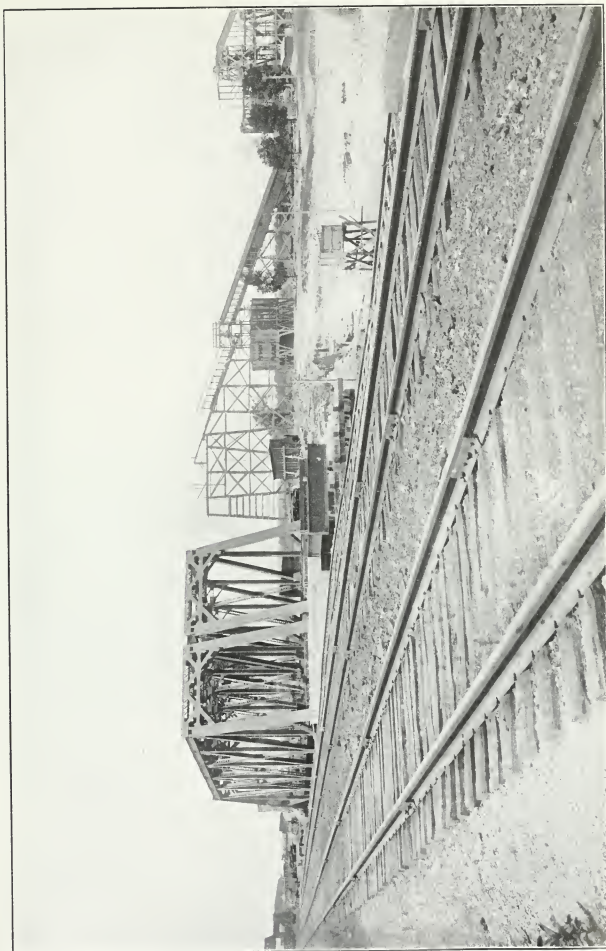
Quebec Bridge. End view of main compression member.



Quebec Bridge. View of one of the 400-ton main pedestals to support bridge on main piers.



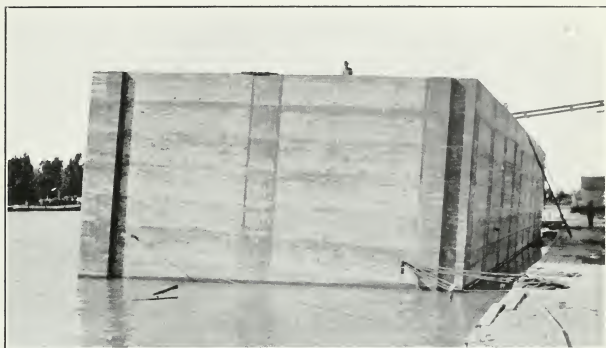
Quebec Bridge, View showing 400 ton section of main chord.



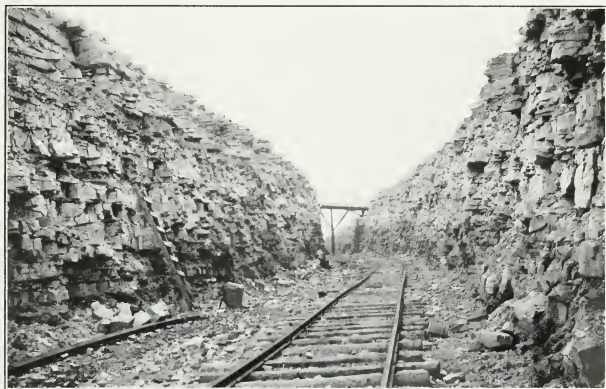
New Welland Ship Canal. Bridges for temporary diversion of Grand Trunk Railway, main line.



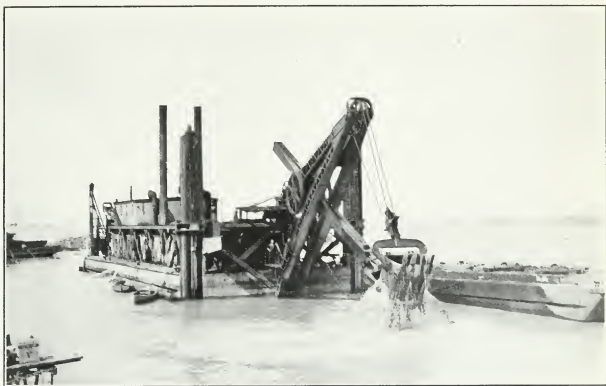
New Welland Ship Canal. Mixing plant and steel reinforcement for concrete entrance wall, Lock No. 1.



New Welland Ship Canal. Reinforced concrete crib for entrance pier, Port Weller, Lake Ontario.



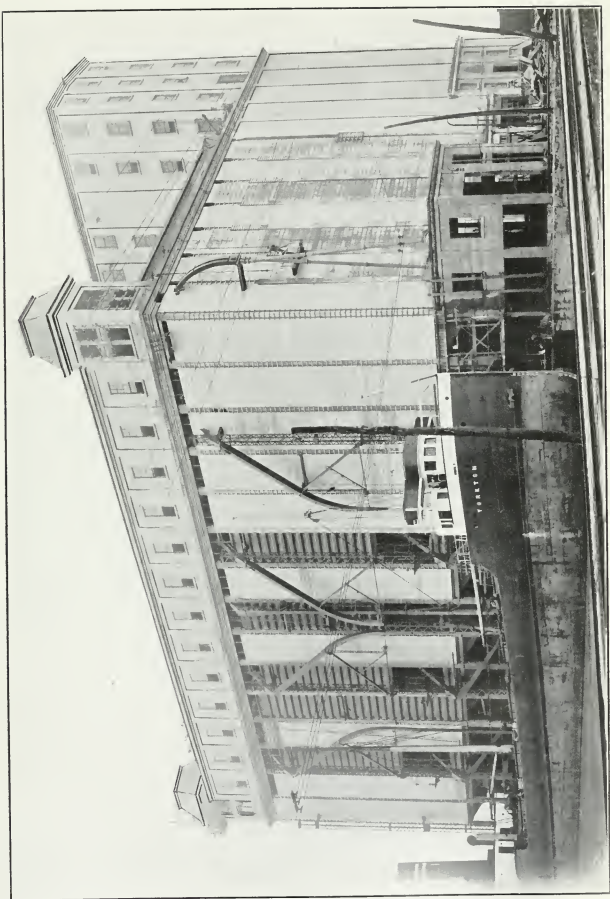
New Welland Ship Canal. Rock cutting for diversion of Grand Trunk Railway, Thorold.



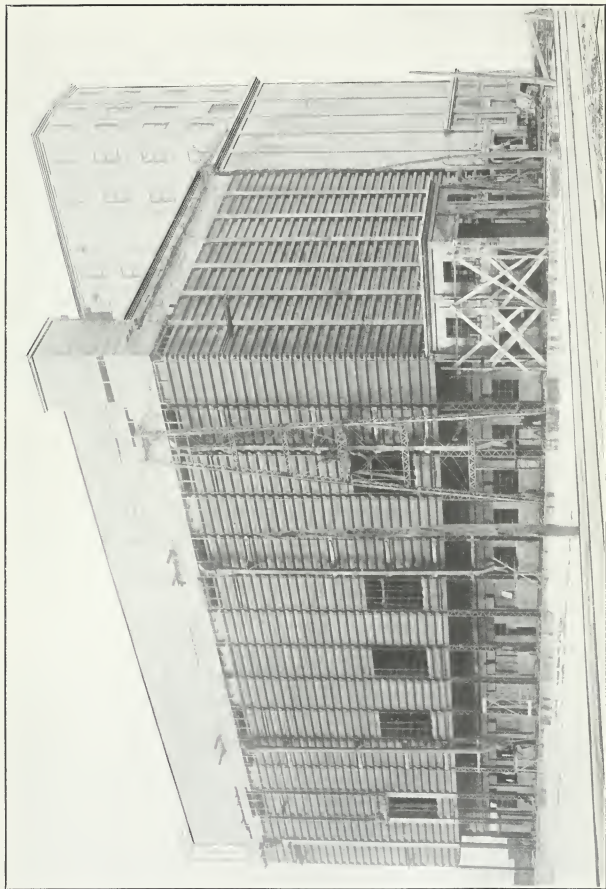
New Welland Ship Canal. One of the large dredges at work at Port Weller, Lake Ontario.



New Welland Ship Canal. Trench for entrance wall, Lock No. 1.



Welland Canal. Grain elevator at Port Colborne, showing the new extension.



Welland Canal. Grain elevator at Port Colborne, showing the new extension.

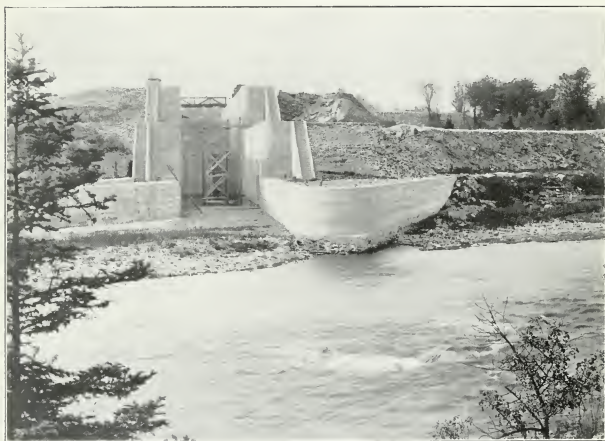


Trent Canal. Lock and Dam No. 2, at Trenton.



Trent Canal. Canadian Northern Railway bridge over the River Trent, at Trenton.

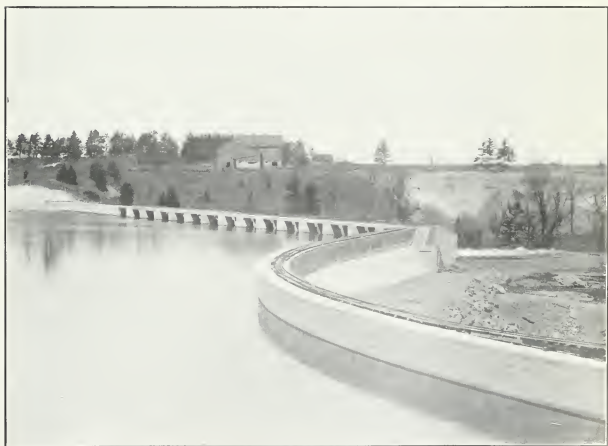
PLATE XLIX.



Trent Canal. Locks Nos. 11 and 12, at Campbellford.



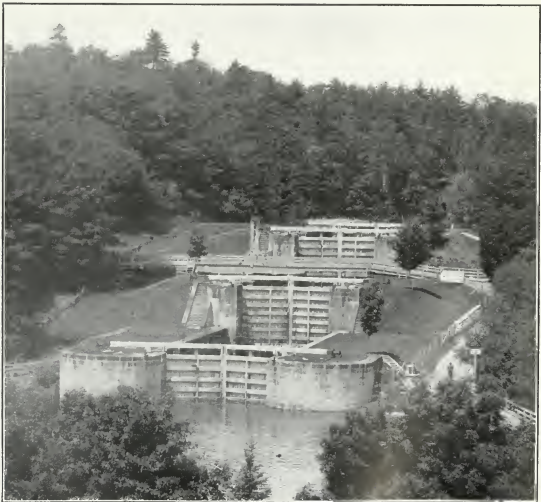
Trent Canal. Heeley Falls weir, River Trent.



Trent Canal. Heeley Falls Dam.



Rideau Canal. Chaffey's Lock.



Rideau Canal. Jones' Falls Locks.



Rideau Canal. Washburn Lock.



Rideau Canal. Kingston Mills, with Grand Trunk Railway main line overhead crossing.





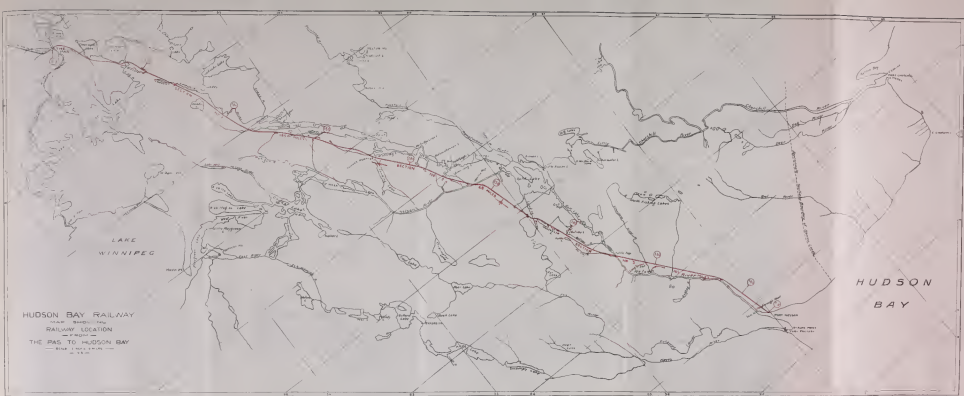




HUDSON BAY RAILWAY
RAILWAY LOCATION
FROM
THE PAS TO HUDSON BAY
— RAIL ROUTE —
— RAIL ROUTE —

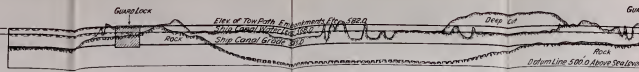
LAKE
WINNIPEG

HUDSON
BAY



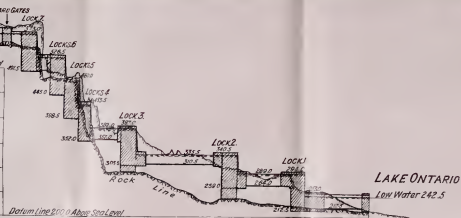
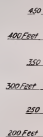
LAKE ERIE

High Water 580.0
Low Water 569.2



GENERAL DIMENSIONS

Length Lake to Lake 25 Miles	Number of Locks 7
Bottom Width 200 Feet	Usable Length of Locks 800 Feet
Width of Water Line 310	Usable Width 80
Depth of Canal 25	Height of Lock Walls above Sills 81.5
Depth on Lock Sills 30	Lift of Each Lock 46.5



LAKE ONTARIO
Low Water 242.5



THE WELLAND SHIP CANAL

SCALE OF MILES

